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ABSTRACT

This report analyzes assumptions and conclusions presented in state reports related to increasing efficient use of college facilities through extended hours of instruction and year-round operation. Data were obtained through questionnaires mailed to every California community college district and through studies on these subjects. One chapter presents a review of the studies and reports of the State Coordinating Council for Higher Education leading to this study, and a review of the literature pertaining to calendars of operation. Another chapter reviews studies by district, aspects of the factors involved in calendar conversion, and computation of gain in enrollment capacity by adopting year-round operation. A third chapter investigates the actual use of facilities, and computes the gain in capacity by extending hours of instruction. The last chapter concludes, in general, that conversion to a year-round operation and/or increasing instructional time will do little to solve the long-term needs for additional capacity of most of the districts. Specific conclusions and recommendations are listed. [Not available in hard copy due to marginal legibility of original document.] (Author/RC)

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A STUDY OF THE VALIDITY OF ASSUMPTIONS RELATED TO YEAR-ROUND OPERATION AND EXTENDED HOURS OF INSTRUCTION IN CALIFORNIA COMMUNITY COLLEGES

A Study
Presented to
the Board of Governors,
California Community Colleges

JC 700 253

by
Weston M. Alt
October 1970

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CHAPTER I

THE PROBLEM AND DEFINITION OF TERMS USED

In any era of expanding school enrollment the need for additional facilities requires careful consideration.

The present growth and, in great measure, the almost explosive enrollment forecast in the immediate future for the California Community Colleges, will require additional capacity and ability to house greater numbers of students.

This may be achieved by creating new colleges, by constructing new buildings on existing campuses, or by other means designed to increase efficiency in utilization of physical facilities.

Mounting pressures of rising educational costs, increased demand on and competition for the tax dollar, and the necessity for achieving ever broadening educational goals in a changing and increasingly complex society, have focused attention more explicitly upon alternative devices to accommodate the increasing enrollment.

This study gave consideration to two important elements involved in increasing efficient utilization of facilities: (1) year-round operation and (2) extended hours of instruction.

THE PROBLEM

Statement of the Problem: The purposes of this study were: (1) to analyze assumptions and conclusions presented in state reports related to increases in efficient operation of California Community Colleges through year-round operation and extended hours of instruction and (2) to test the validity of these assumptions and conclusions by application to the Community Colleges.

Delimitations of the Study: The study was limited in application to the California Community Colleges as now constituted, i.e., two- year institutions of higher education, comprehensive in nature, open to all who can profit by instruction, maintained by independent school districts, and governed by local boards of trustees.

Except as discussed in the review of the literature the study was not concerned with the internal aspects of administration of extending the hours of instruction, or of year-round operation, nor in the solutions to problems raised in conversion from the semester calendar. Neither was it concerned with the relative advantages and disadvantages of various plans to attain year-round operation. All of these are matters for local determination.

Importance of the Study: The high cost of constructing new facilities dictates that maximum possible utilization be made of existing facilities. The State Legislature and State Department of Finance have demanded such assurance in formulating measures of state financial support.

The Coordinating Council for Higher Education, in advising these bodies as to the need for additional centers for higher education, has stated:

> The concept of year-round operations is sound and when instituted in a judicious manner with reference to costs and benefits on an institution-by-institution basis can result in significant total cost savings for all segments by increasing the capability of an institution to accommodate increased numbers of students in the same facilities.[1]

The Coordinating Council Staff found:

> If it were determined feasible after cost-benefit analyses to institute year-round operation in all Junior Colleges, the additional enrollment capacity needed in 1977 could be reduced up to 32%, if the enrollment in the summer term equaled 40% of the fall term enrollments. The number of districts not needing additional capacity would then be increased from 18 to 26.[2]

The Coordinating Council Staff concluded:

> Prior to the establishment of new Junior Colleges by a district, the feasibility and desirability of operating existing campuses on a year-round basis should be determined.[3]

The Council Staff further stated that hours of instruction from 5 p.m. to 10 p.m. Monday through Friday would gain 25 hours of utilization per week. Since regular hours of instruction are from 8 a.m. to 5 p.m. or 45 hours per week, this indicated a potential gain of 55 percent in utilization of facilities.

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[1] Coordinating Council for Higher Education, California. Meeting the Enrollment Demands for Public Higher Education in California through 1977 - the needs for additional colleges and university campuses. (Sacramento: Staff report, February, 1969), p. I-4. (The Council is hereafter referred to as CCHE).

[2] Ibid. p. VI-56.

[3] Ibid. p. VI-59.

It was important to test the validity of these assumptions.

DEFINITIONS OF TERMS USED

Coordinating Council for Higher Education. An agency created by the Legislature to study problems of higher education. The functions assigned to the Council include the "development of plans for the orderly growth of public higher education and the making of recommendations on the need for and location of new facilities and programs"[4]

One of the major functions of the Council is to advise the Legislature, State officials, and the governing boards of public higher education on the need for and location of new facilities.[5]

Community College. A segment of public higher education in California. Two-year institutions, comprehensive in nature, open to all 18-years of age or older who can profit by instruction, maintained by independent school districts, and governed by local boards of trustees.

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[4] California, Education Code, Sec. 22703 (1967).

[5] Ibid., Sec. 22501 (1967).

Junior College. Legal term for community college. The latter term is coming into increased usage as more properly defining its functions.

Academic Calendar. That period of time during a fiscal year that college is in operation. Also referred to as calendar of operation. Also academic year.

Balanced Calendar. The condition when the enrollment in each term is about equal.

Balanced enrollment. The condition of having equal enrollment in each term when an institution is on year-round operation.

Capacity. The physical space to accommodate students at a given time. It is a function of the number and types of classrooms and laboratories available for class scheduling according to established standards for utilization of facilities. An enrollment ceiling may be above or below actual rated capacity.

Cost-benefit analysis. A systematic examination and comparison of alternative courses of action that might be taken to achieve specified objectives in terms of the projected costs and benefits to be derived from each course of action.

Diversion. The shifting of lower division students from one segment of public higher education to another.

Enrollment ceiling. The enrollment an institution plans to accommodate at any given time.

Extended use of facilities. Extending the hours of instruction in order to accommodate additional enrollment within the same physical facilities.

Extended hours of instruction. The scheduling of classes from 5 p.m. to 10 p.m. Monday through Friday, and from 8 a.m. to 12 noon on Saturday.

Forced enrollment. Restricting the entrance and subsequent enrollment of a student to particular terms in order to balance enrollment.

Quarter plan. (system) As it currently operates in most colleges, an academic calendar of three 11-week terms usually with a summer session of 6, 8, or 10 weeks, or a full summer quarter of 11 weeks.

Four-quarter plan. A method of year-round operation, A calendar of four quarters of 12-weeks each, i.e., 48 weeks.

Acceleration of program. Reduction in time necessary to attain goal by continued enrollment in consecutive terms.

Attrition. Decrease in enrollment as a class progresses from regular term to term expressed in whole numbers or as a percentage of original total enrollment.

Segments. University of California, California State Colleges, public community colleges. Also includes private colleges and universities.

Semester. The traditional college semester includes from 15 to 18 weeks of instruction, exclusive of orientation, registration, and final examination.

The public community colleges, under provisions of the Education Code, must maintain a minimum of 175 days of instruction -- the equivalent of two 18-week semesters including examination periods.

Summer session. A special summer program lasting up to, but generally less than, 12 weeks. A college on year-round operation could offer a summer session as well as a summer term.

Summer term. A fourth quarter during the period mid-June to September which is included in year-round operations. It is designed to provide offerings generally equivalent to any other term for regular students.

Term. One complete phase of an academic calendar starting with registration, including an unbroken period of instruction, and concluding with examinations. Terms may be semesters, trimester, quarters or summer session.

Trimester plan. A method of year-round operation. An academic calendar of three semesters of 16-weeks each, - i.e., 48 weeks. Also referred to as three-semester plan.

Year-round operation. There is a lack of consistency of definitions in the literature. According to the California Administrative Code, Title 5 - Education, Article 995(d): "All year-round operation means four consecutive quarters of at least 10 weeks each."

Derived from the literature and discussion with

California educators, the Coordinating Council first set forth this definition:

> A college is operating year-round when the following conditions usually prevail:
>
> 1. A beginning freshman may enter at the start of any term.
>
> 2. Transfer students may enter at the beginning of any term.
>
> 3. ...students can enroll in courses which enable them to make a full term's progress toward their desired degree.
>
> 4. ...students can continue in college for any number of consecutive terms.
>
> 5. Optimum use of physical plant is made for at least 48 weeks annually.
>
> 6. Student enrollment is roughly the same in all terms.[6]

The Council Staff subsequently modified its definition to the extension of the conventional academic year of 36 weeks (two semesters or three quarters) to at least 48 weeks of instruction by the addition of a summer quarter (term).[7]

The last definition is used in this study.

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[6] CCHE, California. A Comparison of the Trimester and Four-quarter Calendars for Year-round operation of Public Higher Education in California. (Sacramento, 1964), p. 3.

[7] CCHE, California, Meeting the Enrollment Demand for Public Higher Education in California Through 1977. (Sacramento, 1969), p. iv.

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Operational ratio. Ratio of enrollment per week of operation to the largest regular term enrollment, multiplied by the ratio of weeks of actual operation to the 48 weeks required for year-round operation.

Utilization of facilities. The period of time classrooms and laboratories are actually in use for instruction. The California Administrative Code prescribes standards of utilization. Also applicable to student stations, i.e., seating.

METHOD OF PROCEDURE

The data for this study was obtained from several sources. An ad hoc advisory committee, with representatives from 21 districts affected by the Council Staff report, was formed. Two meetings were held, one each with northern and southern California Colleges. Advice and counsel were provided on, among others, aspects considered in this study.

Following a review of the literature, studies of 26 districts were analyzed.

Questionnaires were developed to gain primary data directly from the colleges. The questionnaires were sent out from the office of the Chancellor of the California Community Colleges.

Based on a summary of information gained, conclusions were drawn and recommendations made.

ORGANIZATION OF REMAINDER OF STUDY

The remainder of the study was organized as follows:

1. Chapter II presents a review of studies and reports of the Coordinating Council for Higher Education leading to this study, and review of the literature pertaining to calendars of operation.

2. Chapter III reviews studies by districts, aspects of and factors involved in calendar conversion, and computation of gain in enrollment capacity by adopting year-round operation.

3. Chapter IV investigates the actual use of facilities, and computes the gain in capacity by extending the hours of instruction.

4. Chapter V summarizes the findings, draws conclusions and makes recommendations.

CHAPTER II

REVIEW OF THE LITERATURE

The literature was reviewed from two aspects:

(1) the studies and reports of the Coordinating Council For Higher Education and other agencies, leading to the recommendation that "prior to the establishment of new Junior Colleges by a district, the feasibility and desirability of operating existing campuses on a year-round basis should be determined"[1]

(2) a general review of the literature pertaining to various calendars of operation available to the community colleges in making such studies.

STATE STUDIES OF INCREASED UTILIZATION OF FACILITIES

The Master Plan for Higher Education in California recommended that the Coordinating Council for Higher Education study "the relative merits of the three-semester and four-quarter plans for year-round use of the physical plants....and recommend a calendar for higher education in California.[2]

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[1] CCHE, California. Meeting the Enrollment Demand for Public Higher Education in California Through 1977 - the needs for additional colleges and university campuses. Sacramento: Staff Report. February 3-4, 1969, p.3.

[2] A Master Plan For Higher Education in California, 1960-1975. (Sacramento: California State Department of Education, 1960), p.98.

In 1964 the Coordinating Council determined the four-quarter system of year-round operations was best.[3] The University of California and state college systems are in the process of transition to that system, subject to the availability of funds.

With respect to the junior colleges the Council resolved that

> ...each Junior College governing board appraise the recommendation's impact upon the transfer of its students, articulation with other segments of education, and other related matters; and on that basis determine the advisability of conversion to a four-quarter calendar.[4]

In October 1966, the State Board of Education requested each junior college governing board to comply with the recommendation of the Coordinating Council, final decision to be that of the governing board.[5]

In this manner in the operation of higher education the state moved toward (1) the state university and state colleges operating year-round, (2) the four-quarter system and (3) decisions as to the calendar of operations for the community colleges being the responsibility of each separate board of trustees.

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[3] CCHE, California. A Comparison of the Trimester and Four-Quarter Calendars for Year-Round Operations of Public Higher Education in California. (Sacramento, 1964), p. ii.

[4] Ibid. p. iii.

[5] California State Board of Education, "Summary of Actions Taken, October 13-14, 1966" (Sacramento, 1966).

The Coordinating Council staff prepared two studies on the subject. The first study[6] first defined, then investigated the benefits and problems of, year-round operation.

The benefits of year-round operation included:

1. Year-round operations provide education for the largest possible number of students in a given physical plant.
2. Requirements for capital outlay funds are both delayed and reduced while income to fund auxiliary enterprises (e.g., cafeterias, dormatories) is increased.
3. Year-round use provides greater flexibility in respect to many faculty options and opportunities.
4. Year-round operation accords greater flexibility to student options and opportunities.[7]

The main problems in operating year-round were seen as:

1. Both faculty and students may become fatigued with continuous programs.
2. The year-round operation of an institution may result in the understaffing of administrative and other central offices and services.

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[6] CCHE, Ibid.

[7] Ibid., pp. 10-12, passim.

3. Articulation with secondary schools and other institutions of higher education not on year-round operation may be less effective.

4. To be efficient, year-round operation requires adequate enrollment in classes offered during each term.

5. Year-round operation may cause an institution to compress a term into too few weeks.[8]

Relative advantages and disadvantages of the trimester and four-quarter calendars achieving year-round operation were investigated, leading to conclusions that:

1. There is no evidence to show that the kind of academic calendar in use will influence the quality of education programs.

2. The four-quarter calendar may be more appropriately applied to the California systems of public higher education than the trimester plan because of its greater flexibility, better articulation with other educational institutions and greater educational service to the state from institutions not operating year-round.

3. Best results will be obtained if the University of California and the California State Colleges and the California Public Junior Colleges have the same systemwide basic calendar.

4. Since the four-quarter calendar is best for year-round operation, its use in colleges and on campuses not on year-round operation will provide the best articulation with those which do operate year-round.

5. Differences in costs of year-round operation under a four-quarter calendar as compared with a trimester calendar are not of such magnitude as to warrant rejection of this calendar.

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[8] Ibid., pp. 12-14, passim.

6. Some added second level administration will be required when a college or campus moves to year-round operation.

7. Although each system should develop requirements by which it determines when a given campus or college should add a fourth quarter, the requirements of each system should aim toward providing more education for more students within prudent increases in operating costs due to year-round operation.

8. The year-round operation of public-schools, colleges and universities has won strong support, particularly from governing boards, legislators, and the public on the principle of better use of physical plant. The full benefit of this can be achieved only by the fullest possible, reasonable use of facilities.

9. With the number of governing boards in charge of the public Junior Colleges, it is not feasible to obtain with any degree of immediacy a unified action on year-round operation. Moreover, with the great range in full-time enrollments among the Junior Colleges, statewide actions should exempt those with minimal enrollment.

10. A special summer school may be needed for teachers and others whose duties conflict with a summer quarter.[9]

The second study was a comprehensive cost analysis developed in cooperation with the University and the state colleges.[10]

[9] Ibid., pp. 28-29

[10] CCHE, California. "Preliminary Cost Estimates for Year-round Operations at the University of California and the California State Colleges." Sacramento: Staff Report, 1964. pp iii-iv.

This study developed an econometric model of the four-year institution under the four-quarter system.[11] The model assumed that dropouts and transfers would be equal and that there would be no attrition.[12] The model was not applied to the junior colleges who were to make their own determination.

A private consulting firm completed a study of year-round operation for the Coordinating Council in 1968. The firm analyzed data supplied by the Council staff, Department of Finance, Legislative Analyst, and the University and State Colleges.[13]

Major findings were:

1. The decision to initiate year-round operation at the two segments will produce significant savings to the State.
2. The assumptions supporting the 1964 Coordinating Council resolution are reasonably valid.
3. A two-step conversion plant is recommended for those State Colleges still on the semester system, calling for initial conversion to a three quarter system and then to full year-round operation.[14]

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[11] Ibid., appendix A.

[12] Ibid., p. 11.

[13] Touche and others, Evaluation of Year-Round Operations at the University of California and the California State Colleges. (Sacramento Coordinating Council for Higher Education, September, 1968).

[14] Ibid., pp. iv - v, passim.

The study tested the basic assumptions supporting the Coordinating Council's 1964 resolution as listed in the two reports by the Council staff.

The authors found that the assumptions concerning the effect of year-round operation on operating and capital costs were essentially valid on an individual campus as well as segment-wide basis, and that year-round operation would defer the need for facilities, improve utilization of facilities and ultimately result in a reduced need for new campuses and colleges within each segment."[15]

The study reported substantial financial savings in current operation costs over a period of years,[16] but cautioned "the forecasted results...are based upon numerous assumptions....and therefore cannot be completely accurate."[17]

Based on the study's examination and evaluation of the year-round operation experience, the following conclusions and recommendations were developed:

1. The concept of year-round operation is sound, and can result in significant total cost savings for both segments. However, there are differences between the segments, and between the campuses and colleges within the segments. In fact, depending on campus or college policy, the advantages of conversion to year-round operation

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[15] Ibid., p. vi.

[16] Ibid., p. viii.

[17] Ibid., p. ix.

can be great, or non-existent, on an individual campus. These differences prevent the overall conclusion from being applied to every campus and college.

The different policies of the State Colleges and the University relating to the scope and breadth of summer quarter course offerings cause a great difference in the relative magnitude of savings achieved through year-round operation between the segments. The differences between the campuses and colleges relate to the size of the campus or college. The smaller the size, the less likely the campus or college will be able to economically offer the advantages of the summer quarter. Therefore, the decision to offer year-round operation must be a local one, based on the economies of the individual campus or college.

Those colleges and university campuses that are not now offering a summer quarter should be analyzed in detail now, to determine the cost benefits of implementing year-round operation. If cost savings can be demonstrated, planned conversion should be accelerated to the earliest practical date.

2. The decision to offer a summer quarter at a particular campus or college must be based on a complete investment analysis. This will highlight the cost advantages of year-round operation at that campus or college.

3. Each college or campus that is to convert to the quarter system, and then initiate year-round operation should follow the conversion planning schedule we have developed.

4. Because the scope and breadth of summer quarter course offerings has a profound effect on cost/FTE student, we recommend that each college and campus study the effect of reducing the scope and breadth of the summer quarter courses. Specifically, the degree of correlation between scope and breadth of courses and student enrollment should be determined. If the cost

> of the summer quarter can be reduced without materially affecting enrollment, the financial benefits of year-round operation become much clearer.[18]

However, both the Legislative Analyst and Department of Finance questioned whether limiting the number of courses in order to maintain the student/faculty ratio also limits the number of students who will ever attend a summer quarter. They believed that it may be better to reduce the student/faculty ratio if it is determined that limiting the course offerings reduces the probability that the summer quarter will eventually build up to the equivalent enrollment of other quarters.[19]

Certain statements in the Touche report would tend to raise serious questions as to the validity of full applicability of the findings to the community colleges individually or on the whole, i.e.:

> 1. We have shown that a segment can realize greatly reduced need for new facilities by offering a summer quarter. . . .But somewhat different results are obtained when one analyzes an individual campus or college.[20]
>
> 2. The ideal result of this analysis would be to show actual out-of pocket savings for the State. However, there are a number of complicating factors which prevent us from doing this.
>
> 3. However, the results of testing Assumption 9., which predicts the effect of year-round operation on operating costs, indicate that the cost of operating a summer quarter at some campuses

[18] Ibid., pp x. xi.

[19] Analysis of the Budget Bill of the State of California for the Fiscal Year July 1, 1969 to June 30, 1970. Report of the Legislative Analyst to the Joint Legislative Budget Committee, Sacramento, 1969, p. 15.

[20] Touche, and others. op. cit., p. 38.

> is higher than the cost of an academic quarter. If this difference in operating cost is larger than the savings incurred by reduced capital outlays, the net result will be a higher cost to the State.[21]

Nevertheless the Coordinating Council staff has stated:

> The factor of potential savings has recently been validated in a report prepared for the Council by Touche, Ross, Bailey and Smart--an independent management consulting firm. Though none of these studies has considered application of year-round operations in junior colleges, the findings of the investigations are clearly applicable and are assumed so in this report.[22]

Based on this "clear applicability" the Coordinating Council staff has renewed its emphasis on the need for community colleges to study the feasibility of year-round operation before planning new campuses.

> The Board of Governors of the California Community Colleges should be advised to investigate intensively the situation in any district where this report questions the necessity of a new campus, before approving an application for state funds for a project for part or all of a new campus.[23]
>
> In every instance, the Board of Governors should examine costs and benefits of ways and means of increasing individual Junior Colleges' capacity to accomodate increasing enrollments in comparison to costs and benefits of establishing new campuses, taking into account such methods as:

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[21] Ibid., p. 41.

[22] CCHE. Meeting the Enrollment Demand, op.cit., p. I-4.

[23] Ibid., p. vii-9.

1. Causing colleges to move more quickly to year-round operations following intensive costs-benefit study of each college situation:
2. Increasing college planned enrollment ceilings and adding additional facilities subject to limitations of site and/or site acquisitions;
3. Increasing use of existing facilities through expansion of evening programs, late afternoon classes and classes on Saturday;
4. Increasing planned annual growth to bring a college to maximum planned ceilings earlier.[24]

Methods one and three were considered in Chapters III and IV of this study.

Faced with mounting pressure a number of community colleges turned to the literature as a basis for individual studies of year-round operation.

GENERAL LITERATURE RELATED TO UTILIZATION

In 1932, W. H. Cowley presented a thorough, comprehensive calendar study. His opening paragraph is equally applicable today:

> Since the founding of the first American college in 1936, four varieties of academic calendars have been at various times in vogue in American colleges and universities: the four-term system, the three-term system, the two-term or semester system and the quarter system. It might be supposed that after three centuries of experimentation one of these four methods of organization of the college year would have emerged as superior to the others, but

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[24] Ibid., p. vii-9.

> the ideal calendar, strangely enough, continues in not a few institutions to be a moot and perplexing problem.[25]

The origin of the three-term plan is not definitely known, but Cowley believes that it can be traced back to the founding of William and Mary in 1693.[26]

Three factors contributed to the emerging of the semester plan as the common pattern in the mid 1800's: (1) the decline of students teaching in the winter months, (2) a desire to equalize the length of the terms, and (3) the influence of German education upon American scholars and the writings concerning German educational philosophy and practices.[27]

According to Reiter, "the University of Chicago, under the presidency of William Rainey Harper, is credited with reintroducing the quarter plan in its present form in 1894, and the University of Pittsburgh with the first of the modern trimester plans in 1959."[28]

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[25] W. H. Cowley, A Study of the Relative Merits of the Quarter and Semester Systems, (Ohio State University, May, 1932), p.3.

[26] Ibid., p. 5.

[27] Ibid., pp. 9-10, passim.

[28] John L. Reiter, Survey: Year-round Utilization of College Facilities: A Summary Report. (Los Angeles: Los Angeles City Schools, 1965), p. 12.

In the elementary and secondary schools, as Lombardi points out, "the all-year plan has had a long and fitful history since 1904 when the quarter system was first introduced at Bluffton, Indiana."[29]

While the efforts of the public school systems to move toward an all-year plan gained a foothold in the 1920's, interest rapidly waned. The present situation is described by the following succinct conclusion:

> communities that have tried the plan have abandoned it; communities that have investigated the plan have rejected it.[30]

At the present time the most prevalent academic calendar among American colleges is the semester system, according to an investigation by West and West:

> It seems that, to date at any rate, whatever modifications have been made toward "year-round operation" have generally been within the customary semester and quarter calendars. The evidence from tabulations covering an eight-year period show, in fact, that the semester plan has been increasing, both in the percentage and the number of institutions involved, through 1962-63. In 1963-64, the number continued to increase but the percentage declined.[31]

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[29] John Lombardi, "The Los Angeles Study of Year-Round Operation", Theory Into Practice, I:3, June, 1962, p. 131.

[30] Minnesota Department of Education. "A Longer School Year: All-Year School and Other Plans to Extend the School Year. Research Project No. 12. (Mimeo: 1958) p. 4.

[31] Elmer D. West and Penelope Jane West, "The 'Mester Plan." College and University, Fau. 1964. pp. 15-18.

With reference to the acculated body of literature an observation by Lombardi fifteen years ago is still valid -- that is, that "much of the literature is merely the opinions of the advocates and opponents of the plan"[32] (i.e., the all-year school). While discussion and debate in higher education has intensified greatly in recent years, most departures from traditional college calendars are still too new to yield evidence of controlled experimentation or the evaluation of educational outcomes based on change. As pointed out by Stickler and Carothers:

> It must be remembered that many of the plans for year-round calendars are relatively new. Many have been in operation only a year or two; others will not be launched until the fall of 1963 or the fall of 1964 or even later. Dozens of institutions are only now getting their programs to the blue-print stage; scores of others are just thinking about the problem. Because experience with the new calendars to date is limited, it is too early to make a careful analysis of year-round campus operations or to draw definitive conclusions concerning their effectiveness.[33]

The monograph by Stickler and Carothers[34] reported the results of a study of 54 institutions which had converted to some form of year-round operations or were studying such conversion. Twelve institutions were judged by the authors to have ability to furnish only limited information useful to the study. Twenty-one institutions were visited.

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[32] John Lombardi, The All Year School, (Los Angeles: Los Angeles City School Districts, July 1954), p. 7.

[33] W. Hugh Stickler and Milton W. Carothers. The Year-Round Calendar in Operation, (Atlanta: Southern Regional Education Board, 1963), p. vi.

[34] Ibid., p. 11 et seq.

The second chapter of the monograph reported the status, trends, and problems encountered in connection with the year-round calendar. The portion dealing with the financial implications of year-round operations was inconclusive.

> Relatively few institutions of higher education have adjusted their calendars and their policies in such a way as to hope for optimum use of their faculties and physical facilities. Within this group, a much smaller number have operated under their changed programs long enough for accurate statistical data relating to the financial aspects of year-round operation to be available. It is not feasible to give "before and after" comparative costs for these institutions either separately or as a group. Neither is it possible to make meaningful financial comparison between this group and other institutions operating on traditional calendars. . .This chapter on financial implications of year-round operation must necessarily depend largely on subjective judgements of individual faculty members and administrators, faculty committees, and consultants who have had experience with programs or who have given considerable thought and study to the subject.[35]

Stickler and Carothers suggested that unit costs of operation could actually be decreased provided that the summer enrollment could be increased to approach the enrollment level of other periods with fifty percent of the fall enrollment suggested as the break-even point.[36]

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[35] Ibid., p. 19.

[36] Ibid., p. 35.

The shape of things to come was forecast in the consideration of capital outlay costs:

> The financial advantage of year-round operation is much more important in the area of capital outlay for buildings and equipment than in the area of operating cost. The financial burden of providing additional physical facilities will likely prove to be the most powerful single influence in stimulating year-round operation.[37]

The authors concluded that particular attention needs to be given to upgrading the character, status and attractiveness of the summer term in order to balance enrollments among the terms, such balance being necessary to the achievement of potential savings in year-round operation.[38]

Hungate and McGrath expressed the belief that

> educational rather than fiscal matters should receive primary consideration in the revision of the academic calendar but potential savings cannot be regarded as inconsequential.[39]

They did not consider the problem of variation in enrollments among the terms, but assumed that year-round attendance would follow year-round operation.[40] The institution could thus educate as many students in three years under the tri-mester plan as it did in four years under the conventional plan.

[37] Ibid.

[38] Ibid., Chapter 5, passim.

[39] Thad L. Hungate and Earl J. McGrath, A New Trimester Three-Year Degree Program. (New York: Teachers College, Columbia University. 1963), p. vi.

[40] Ibid., p. 14.

Since junior college students do not pursue uninterrupted education and because there is considerable variation in enrollment among the terms, this study is of little value to the community colleges.

Dean Elmer C. Easton of Rutgers University developed mathematical models of a university offering baccalaureate, masters', and doctoral programs as well as conducting research not directly connected with the teaching programs.[41]

Assumptions were made as to the number of courses required for each degree (among the assumptions were "all freshmen take the same courses" and "there is no choice of elective courses").

Easton concluded that there could be substantial increase in the number of degrees granted, use of instructional facilites, and faculty salaries.

To gain these advantages it would be necessary to, among other things, give up summer session activities such as conferences, symposia and short courses; alter the traditional pattern of starting time and vacation period for students, and for maximum advantage, enforce uniform distribution of students among the several entering classes per year.

[41] Elmer C. Easton. Year-Round Operation of Colleges (New Brunswick, N. J.: College of Engineering, Rutgers, The State University, 1958).

These steps would negate much of the value of community college offerings, contrary to the "open-door" policy in California, and ignore the characteristics of junior college students as to their degree of persistence, objectives, and the necessity to earn all or part of their expenses. The findings of the study were thus not clearly applicable to the community college.

Aiming at increasing the capacity in public higher education in that state, Nelson Associates, management consultants, completed a study in 1961 for the State University of New York.[42]

Their study defined several "optimum conditions for year-round operations."[43] They were:

1. Terms of equal length, character and status,
2. Equal admissions every term; and,
3. As many full length terms as could be fitted manageably in the calendar year.

Nelson Associates developed the concept of the "balanced calendar", i.e., the admission of equal numbers of first-time freshman at the beginning of each quarter or trimester by an institution under year-round operations.

[42] Increasing College Capacity by Calendar Revision, A report to the State University of New York (Albany: Nelson Associates, 1961).

[43] Ibid., pp. 18-20.

Students would take off one term a year.

With this balance of enrollment and assuming the same student persistence, the institution could be at near capacity each term. However, Keene found that

> With high schools graduating classes once or twice each year and colleges under the balanced calendar admitting first-time freshmen in controlled numbers three or four times a year, a number of high school graduates would have to wait up to six or more months before they could begin their college work.[44]

If the secondary schools were also on year-round operation, the problem of articulation with institutions of higher education would be reduced. Inputs of secondary school graduates would be available three or four times during the year, hopefully in approximately equal numbers. Further, the concept of year-round operation would be a familiar one.

The Nelson Associates presented several general conclusions.[45] Among them were:

1. A balanced year-round calendar provides the best means of increasing college capacity through calendar revision.
2. Both trimester and four-quarter calendars are superior in efficiency to the conventional calendar.

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[44] James W. Keene. An Econometric Model of the California Public Junior College Operating Year-round. Sacramento: California State Department of Education, 1967), p. 14.

[45] Nelson Associates, op. cit., pp. 105-106, abridged.

3. When equal term enrollments are not possible because equal admissions every term are not achieved, substantial advantages can still be obtained.

4. The advantages of year-round operation appear to be as great for two-year colleges as for four-year colleges.

5. Although operating costs per student will decline, total operating budgets will rise as college capacity increases with calendar revision.

6. Balanced calendars will result in markedly reduced capital costs per student place.

7. Enrollment capacity can also be increased by lengthening the academic day and week, but only to the extent that the capacity of non-instructional space permits.

Attrition was taken account of by allowing 25 percent to graduation in the community colleges. This rate is much lower than the effective attrition rate for the California public community college.

The model student was depicted as one who is full-time and either graduates or drops out entirely. No recognition was given to the student who re-enters and thereby extends his demand on the system.

While indicating increased utilization of facilities through both year-round operation and extension of hours of instruction, the study likewise indicated increased budgetary costs will result.

Tickton summarized data on 40 institutions committed to, or operating on, year-round calendars. His summary indicated that as of 1963 no academic calendar had emerged as best or even clearly as the most popular method of

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achieving year-round operation.[46]

Bauman developed a plan wherein the school is operated 11 months a year with students attending three of four quarters.

Bauman found numerous advantages to year-round operation.[47] The only disadvantage he admitted was the difficulty which small school districts might encounter were they to adopt year-round operation.[48]

The general value of the literature, especially as it pertains to the community colleges, was well expressed by the Coordinating Council staff in one of its reports:

> ...documents are based more upon reasoned argument than upon evidence, a characteristic of almost all material dealing with calendars and calendar changes.[49]

With this paucity of research applicable to the responsibility placed upon them by the Coordinating Council, the California Community Colleges faced the problem of determining whether or not year-round operation was feasible.

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[46] Sidney G. Tickton, The Year-Round Campus Catches On. (New York: Fund for the Advancement of Education, 1963).

[47] W. Scott Bauman, The Flexible System: An Analysis of the Quarterly Calendar in Public Schools (Toledo: Business Research Center College of Business Administration, University of Toledo, 1969), pp. 34-37.

[48] Ibid., p. 31.

[49] CCHE, California: Comparison of the Trimester and Four-Quarter Calendars, op. cit.

UNIQUENESS OF THE COMMUNITY COLLEGES AND CHARACTERISTICS OF THE STUDENTS

Any consideration of the academic calendar must first take into account the specific nature and function of the institution concerned, the characteristics of the students who are to be served, and the curricular offerings which will control the conditions and circumstances under which instruction will be offered.

The public community college is a full partner in higher education but with its own identity, unique and different from the four-year institutions. It is rapidly taking on new and expanded roles in the changing educational scene.

In addition to the transfer program, the community college has great responsibilities in the areas of vocational-technical education, general education, specialized training, individual counseling, adult education, and community services.

These responsibilities, together with effects of automation, increased leisure time, and training and re-training for new vocations, all point to continuous change in the functions of the community college.

Further, recognition must be given to the wide range in the educational background, intellectual potential, interests, aptitudes, abilities, and ages of the community college students.

These factors have a direct bearing upon any assumption that any pattern of a computationally successful calendar of operation at the university or college level would serve equally well a junior college, where the only criteria for admission is to be 18 years of age and able to profit from instruction.

Medsker's comments emphasized these striking differences:

> There is no such person as "the junior college student." Individual differences and lack of homogeneity preclude the description of"the student" in even the most selective college, but the diverse nature of the community college student body almost defies a stereotype. Furthermore, there are differences in the natures of student bodies among junior colleges as well as among states and regions....Furthermore, it is necessary to recognize differences among individual junior colleges--even those of the same type.[50]

Junior college students, in large numbers, enter with poorly defined and often unrealistic educational goals. Medsker has also stated:

> Although by no means true of all students, a high percentage of those who enter junior colleges have not given adequate time and attention to long-term educational planning. Many are in junior colleges because they cannot be admitted elsewhere. Many made their decision to attend college late in their high school career or after its completion.

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[50] Leland L. Medsker, "The Junior College Student," Appraisal and Development of Junior College Student Personnel Programs, (Flint, Michigan: Cooperative Research Project No. F-036 of the Office of Education, U. S. Department of Health, Education and Welfare, 1964), p. 68.

> There is lack of congruence between actual junior college attendance and the college plans which students stated prior to graduation from high school. A high percentage of entering students show lack of realism when they declare their intention to transfer later. Stated reasons for attending junior college may not be the compelling explanations.[51]

Between 22 percent and 25 percent of all junior college entrants will actually transfer to some four-year institution; however, Gleazer's comments were worth noting in this connection:

> The fact that many of these students do not transfer is not an indictment of the programs but of the American preoccupation with the notion that a college education is circumscribed by four years of study culminating in the receipt of a baccalaureate degree. What actually happens is that many of the students aspiring to a four-year program will find that their abilities, interests and motivation do not match the rigor of the study required. When this happens, the junior college performs another important function by directing the students into occupational programs which may better suit their interests and abilities.[52]

> Generalized demographic data for day students indicated that male students hold a 2.1 ratio to females, the median age was just under twenty years, approximately twelve percent were married, and just under half of the fall enrollment were "new" to the college. Day students tended to start each semester with an average load of just over twelve units

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[51] Ibid., p. 70.

[52] Edmund J. Gleazer, Jr., "Junior Colleges Grow Up - Professionally - and Out - Vocationally", College and University Business, 37:5:62-64, November, 1964.

and by the close of the term this average dropped to nearer ten units.

The picture changed for evening division students, who enrolled in large numbers. Study data indicated that fifty-five percent were male, the median age was near 28 years, approximately fifty-five percent were married, and only thirty-five to forty percent were "new". For evening division students, who normally carry a much lighter program, the average load at the close of the term was four units.[53]

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[53] John L. Reiter. Survey: Year-round Utilization op. cit., p. 7.

ECONOMETRIC MODEL FOR YEAR-ROUND OPERATION OF JUNIOR COLLEGES

When the State Board of Education requested that the governing board of each school district operating a junior college comply with the Coordinating Council's request, it also requested that the State Department of Education assist the local boards by furnishing studies and mathematical models as appropriate.[54]

The supporting document developed was by James W. Keene, former executive secretary, Junior College Advisory Panel to the California State Board of Education, as a doctoral dissertation, entitled "An Econometric Model of the California Public Junior College Operating Year-Round."

It presented an overview of year-round operation and presented a mathematical model by which utilization indices could be completed for the semester system and for the quarter system for various proportions of students. electing to enroll year-round for comparison.

The model purported only to cover recent high school graduates and those only in districts serving high schools with once-a-year graduation.

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[54] State Board of Education, "Summary of Actions Taken, October 13-14, 1966." Sacramento, 1966.

For purposes of his study, Keene considered a college to be operating year-round when the following conditions usually prevailed:[55]

1. A beginning freshman may enter at the start of any term.[56]
2. Transfer students may enter at the beginning of any term.
3. As a general rule, both entering and continuing students can enroll in courses which enable them to make a full term's progress toward their desired degree[57] or certificate.
4. Almost all students can continue in college for any number of consecutive terms in each of which they can make a full term's progress toward their desired degree or certificate.[58]
5. Near optimum use is made of the physical plant for approximately 48 weeks annually; such optimum use to include providing space for advising students, registration, instruction, and testing.
6. Student enrollment is roughly the same in all terms.

Keene found certain problems which bore upon "the advisability" of conversion:

1. With respect to actual utilization of facilities year-round, he noted:

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[55] Keene, op. cit., p. 6.

[56] However, some colleges using a four-quarter calendar may choose not to admit freshmen into a specific quarter, such as the winter quarter.

[57] _Degree_ includes both the associate degree and in the case of transfer students, the baccalaureate degree.

[58] Low demand courses need not be offered every term to comply with this provision.

Approximately 95 percent of all California public high school graduates are graduated in June. Such a graduate wishing to accelerate his program enters a junior college at the beginning of the summer quarter, on or about July 1. Under conditions of no attrition, he graduates from junior college at the end of December, 18 months later. Since no recent high school graduate is available to take his place, his student station will remain unoccupied through the winter and spring quarters until the next high school class has graduated. Thus, he has occupied his space in the junior college for six of eight quarters generating a plant utilization efficiency of 75 percent. Likewise, his classmate who conventionally takes the summer quarters off occupies his space six of eight quarters for a plant utilization efficiency of 75 percent. In the case of the four-year institution, the accelerating student in a no attrition model finishes in three years, leaving his space vacant at precisely the moment when another accelerating student is ready to take his place.[59]

2. Studies of the state colleges, such as those by Simpson,[60] were less applicable for junior college purposes because the low attrition ratio was not significant in the results, large numbers of school teachers attended summer session, and fees charged the students covered essentially all the costs of the session.[61]

[59] Keene, op. cit., p. 24.

[60] William B. Simpson, "Reports of Committees on Year-Round Study," California State College at Los Angeles. 1965-66, mimeo in four volumes.

[61] Keene, op. cit., p. 25.

3. There is a dilemma in applying the model of acceleration (i.e., continuous attendance so as to graduate in three years) to the California public junior college with its open door policy. An able student who goes year-round can complete his program in 18 months and, hopefully, transfer to a senior institution with an articulating calendar where he can complete his work there in an additional 18 months. But, 18 months is one and one-half years. The junior college which he leaves must find a replacement for him if it is to keep its plant utilization high. Unless its feeder high schools are graduating substantial numbers at midyear, this is likely to prove impossible.[62] But most junior college students are not, in fact, able students who carry successfully full academic loads term after term until they complete their programs.[63]

4. The high-attrition, low-persistence, characteristic of the junior college student is critical to a consideration of plant utilization under year-round operations. In the fall semester of 1965, the freshmen outnumbered the sophomores almost three-to-one statewide in the California public junior colleges.[64]

5. A further complication is the relatively large numbers of part time students in the junior colleges. "Many students carry loads of approximately two-thirds or one-half of a full load. If these students persist, their attendance patterns in terms of demand for student spaces will vary widely over time

[62] About 95 percent of all California public high shcool graduates are graduated in June. CCHE, A Comparison of Trimester, op cit., p. 13.

[63] Keene, op. cit., p. 26.

[64] Ibid., p. 26.

from that of the full time student."[65]

6. The problem of attrition could be avoided by the use of controlled enrollment practices. This device is denied the California public junior college by the open door policy.[66]

7. The pressures on local boards to make a conversion to some form of the quarter calendar.[67]

8. Conversion to year-round operation must take place without significant modification of the open-door policy. This policy demands:

   a. That all applicants who are high school graduates or who are over eighteen years of age and able to profit from instruction be accepted as students and,

   b. that no eligible student will be denied admission. This implies, in general terms, the provision of facilities and faculty to handle whatever number of students apply and in the term beginning next after they apply.[68]

Incorporating the above constraints, Keene applied empirical data from 12 randomly selected California public junior colleges to a theoretical model to predict plant utilization under the four-quarter system of year-round operations.

A recapitulation of the results showed that under a shift to the four-quarter system with 40 percent of the students electing to enroll year-round, the median gain in plant utilization to be expected was 4.53 percent.[69]

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[65] Ibid.

[66] Ibid., p. 27.

[67] Ibid., p. 28.

[68] Ibid., p. 29.

Keene states that "it would appear prudent for a junior college to examine possible implications of revising the length of the day and of the week before making a decision to shift to a year-round calendar."[70]

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[69] Ibid., p. 125.

[70] Ibid., p. 129.

SUMMARY

The literature stressed need for study of year-round operation on an individual campus basis and raised questions as to the factors of size, scope and breadth of summer term course offerings, and student-faculty ratios.

Costs for capital outlay are measureable. Costs of operation for summer terms have not been clearly defined. In some cases they are higher than the operating costs of other terms. Total budgetary costs will increase under year-round operation.

There is no single best calendar. Successful operation depends in large measure on balanced enrollment.

Much of the literature represents merely opinions of advocates and reasoned argument. There is insufficient research upon which to base judgment.

There is great difficulty in applying mathematical models to real-life situations.

Because of the uniqueness of its program and characteristics of its students, conclusions derived from studies at the university or college level are not necessarily applicable to the community college.

Several assumptions upon which computationally successful year-round operation are based would negate some of the value of the total community college program, is contrary to the "open-door" policy of admissions, and ignores student characteristics.

CHAPTER III

ASSUMPTIONS RELATED TO YEAR-ROUND OPERATION OF CALIFORNIA COMMUNITY COLLEGES

The Coordinating Council for Higher Education in California has taken a firm stand with regard to year-round operation of Community Colleges. Citing the concept as sound, the Council has concluded that such operation can result in significant total cost savings.

Several conditions usually prevail when a college is operating year-round. Beginning freshman and transfer students may enter at the beginning of any term, entering and continuing students can enroll in courses making a full term's progress toward their degrees, and student enrollment is roughly the same in all terms.

Addition of a summer quarter to any system to gain the equivalent of four quarters of operation does not necessarily presuppose these conditions. Such addition may be solely for the purpose of facilities utilization.

Since the primary consideration in cost savings is utilization of facilities, this study was developed in terms of extension of the academic year to a total of 48 weeks of operation by summer operation up to 12 weeks duration (with an enrollment 40 percent of the fall term).

Topics reviewed in this chapter on year-round operation were: studies by districts, enrollment and calendars of operation, plans to convert to quarter system, factors influencing decision, factor of size, balanced enrollment, forced enrollment, cost factor, enrollment capacity, actual utilization of facilities during summer sessions, and computed gain that might be achieved.

STUDIES OF DISTRICTS

Prevalence of the semester system is shown by the Office of Statistical Information and Research of the American Council on Education. Of 1,058 regionally-accredited universities and colleges as of January 1, 1960, a total of 147 institutions (or 14 percent) were on a quarter system. Most of the remaining colleges were on the semester system. The 1956 report showed that of 969 colleges, 1965 (or 17 percent) were on a quarter system. Between 1956 and 1960 there was an increase of 89 colleges and a reduction of 18 operating on the quarter system.[1]

The most comprehensive study by a California Community College district was by the Los Angeles City School District in February 1965.[2] The survey considered: (1) sources of materials, setting of the study, and guide lines,

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[1] Quarter Report, Cerritos College (December 1967), p. 5.

[2] John L. Reiter, Survey: Year-Round Utilization of College Facilities: A Summary Report. (Los Angeles: Los Angeles City Schools, February 1965).

(2) historical background and objectives, (3) quarter plan, (4) trimester plan, (5) semester/extended summer plan, (6) the Coordinating Council comments, (7) legislation and opinions of studies and faculties, (8) problems of articulation and curriculum planning, (9) problems of costs and enrollment, and (10) problems of implementation and transition.

Quantitative work compared two versions of the semester-plus-summer, the trimester, and the quarter plans of year-round operations, using costs and enrollment figures for that district for fiscal year 1963-64. The comparative output in units of average daily attendance showed:

	Average Daily Attendance	Comparison
Present Semester + One Summer Session		
Year-Round Operation	38,619	100.00%
Semester = Two Summer Sessions	40,296	104.34%
Quarter Plan	38,839	100.56%
Trimester Plan	40,064	103.74%[3]

The comparative costs per Average Daily Attendance for the options under year-round operation were:

Semester + Two Summer Sessions	$624.06
Quarter Plan	644.84
Trimester Plan	627.21[4]

[3] Ibid., p. 69.

[4] Ibid., p. 70.

Conclusions of the survey were:

1. In light of the advantages to be gained, year-round operation for the Los Angeles City Junior College District is considered to be educationally feasible and desirable and, assuming the district is able to bear the added cost, financially feasible and desirable.[5]

2. The semester/extended summer term plan (18-18-12) appears to have greater advantages and fewer disadvantages for the year-round operation of the Los Angeles Junior College than either the quarter plan or the trimester plan.[6]

3. Should the semester/extended summer term be attempted, it would appear desirable that year-round operation begin at the earliest feasible date, (i.e., summer of 1966). Should the quarter plan or the trimester plan be favored, it would appear advantageous that the final decision be delayed from two to three years.[7]

4. It would appear desirable that a standing committee be created to coordinate the implementation of any year-round calendar and to study further certain concepts and areas designated by the survey (these would include articulation and curriculum considerations, financial aspects, legislative action, necessary changes in the Education Code and other legal factors, the effect upon junior college enrollments of redirection, diversion, changes in the eligibility index, implementation of the Master Plan, and the effects of tuition charges or other increase of costs).[8]

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[5] Ibid., p. 84.

[6] Ibid., p. 85.

[7] Ibid., p. 87.

[8] Ibid., p. 89.

In studies and comparisons of various calendars, faculty and students appeared to favor the calendar with which they have had the most experience. Instructors increased their acceptance of the quarter system with increased years of experience with the system. The

> university faculty voted slightly in favor of a three-term plan over a quarter system. Students, on the other hand, preferred a quarter plan - suggesting perhaps that professors tend to support the status quo while the students want change.[9]

CALENDARS OF OPERATION

Questionnaires were sent from the Office of the Chancellor of the California Community Colleges to the 68 districts maintaining 89 Community Colleges. Of 60 districts responding, 26 districts had made studies on year-round operation. These Community Colleges concluded that (1) Community Colleges should wait to profit by the experience of Community College districts operating on the three quarter plus summer session and four quarter calendars, (2) regular terms plus summer sessions appeared at that time to be best suited to operations, (3) there should be continuing study of this subject, and (4) additional state support would be required to absorb additional costs in order to convert to year-round operation.

[9] Fred Kintzer, Implications for Junior Colleges in the Year-round Operation and Revision of the Academic Calendar of the University of California, (Los Angeles: University of California, 1966).

It was noted that the five most recently established districts, plus the newest (sedond) campus in an existing district, have all adopted a quarter system of operations. These included: Butte (Butte County), Fremont-Newark (South Alameda County), Redwoods (Humboldt County), Saddleback (South Orange County), Santa Clarita (North Los Angeles County), and Columbia College, of the Yosemite District (Tuolumne County).

Even in these districts, however, the calendar of operation differed. One operated three quarters only, one operated four quarters only, and the remaining four operated three quarters plus summer session.

Tables I and II indicate enrollment and calendars of operation for 55 Community College districts. Twenty-six districts, with enrollments ranging from 243 to 42,970, made studies of year-round operation. Only one district operated on the quarter system. None reported changing calendars as a result of these studies. Of the 29 districts reporting no study, three had campuses on the quarter plan and seven had enrollments sufficient to indicate the possible advisability of operating on the quarter system.

TABLE I

CALENDAR OF OPERATIONS OF 26
DISTRICTS REPORTING
STUDIES OF YEAR ROUND-OPERATION

District	Enrollment	Calendar
Los Angeles	42,970	2+10-12
San Diego	9,826	2+8
Long Beach	9,347	2+6+6
Contra Costa	9,207	2+6
Orange Coast	8,899	2+8
El Camino State Center	8,651	2+6+4
State Center	7,303	2+6
Cerritos	7,148	2+5-8+5
Mt. San Antonio	6,652	2+6
South County	5,430	3Q+6
Ventura	5,214	2+6+4-6
San Bernardino	5,025	2+6-8
Kern	4,796	2+6
San Joaquin Delta	4,602	2+6
Riverside	3,783	2+6
Sonoma	3,115	2+6
Glendale	3,080	2+6-9
Sweetwater	2,765	2+6+3
Palomar	2,527	2+6
Shasta	2,377	2+6
Citrus	2,416	2+6
Hartnell	2,125	2+6-8
Antelope Valley	1,477	2+6-9
San Luis Obispo	1,363	2+6
West Kern	522	2+6
Palo Verde	243	2+6

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[1] Enrollments are for 1967-68.

[2] Explanation of Symbols: 3Q, three quarters, 3Q+SS, three quarters plus a summer session, 2+6, two semesters plus a six-week summer session, 2+10-12, two semesters plus concurrent summer sessions of 10 and 12 weeks, 2+6+4, two semesters plus consecutive summer session of 6 and 4 weeks.

[3] Los Angeles Colleges offered the following summer sessions: City-12, East-12, Harbor-10, Pierce-10, Southwest-12, Trade-Technical-10, Valley-12, weeks of operation.

[4] State Center District in the Fresno area of the San Joaquin Valley offered summer sessions at Fresno, none at Reedley.

[5] Ventura District offered 12-week summer sessions at

TABLE II

CALENDAR OF OPERATIONS OF 29 DISTRICTS REPORTING NO STUDIES OF YEAR-ROUND OPERATION

District	Enrollment	Calendar
Los Rios	12,495	2+8
San Francisco	9,765	2+6
Peralta	9,156	4Q,2+6
North Orange	8,956	2+6-8
San Mateo	8,730	2+6
Foothill	8,113	3Q+8
Pasadena	8,110	2+6+6
Santa Monica	6,835	2+6
Grossmont	5,483	2+6-8
San Jose	4,626	2+6
Yosemite	4,079	2+6
West Valley	3,656	2+6
Marin	3,652	2+6
Cabrillo	3,545	2+6
Chaffey	3,385	2+6
Yuba City	2,608	2+6
Sequoias	2,592	2+6
Monterey	2,426	2+8
Santa Ana	2,122	2+8
Allan Hancock	2,010	2+6
Sierra	1,921	2+6
Imperial Valley	1,806	2S
Merced	1,634	2+6
Coachella Valley	1,316	2+6+4
Mt. San Jacinto	1,076	2+6
Oceanside-Carlsbad	1,024	2+6
Gavilan	775	3Q+6
West Hills	694	2S
Barstow	368	2+6

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[1] Enrollments are for 1967-68.

[2] Explanation of Symbols: 3Q, three quarters, 3Q+SS, three quarters plus a summer session, 2+6, two semesters plus a six-week summer session, 2+10-12, two semesters plus concurrent summer sessions of 10 and 12 weeks, 2+6+4, two semesters plus consecutive summer session of 6 and 4 weeks.

[3] In the Peralta District of Alameda County, Merritt was on the four-quarter system, and Laney on a two-semester-plus-summer session.

PLANS FOR CALENDAR CONVERSION

Districts were asked if they planned to convert to the quarter calendar. Where the closest universities or colleges were already on the quarter system, only three community colleges indicated plans to convert from the semester to the quarter system. The colleges, Barstow, Chaffey and Diablo Valley, planned to convert in 1971-72.

Fourteen other districts plan to convert to the quarter system when the colleges or universities closest to them make the change. Finally, 22 districts answered that no plans were being made for conversion to the quarter system.

In responding to the query concerning plans for conversion, several districts attached their studies as well as comments related to the factors influencing their decisions.

South County College District, (located in southern Alameda and Contra Costa counties) with an enrollment of ,430, converted to the three-quarter calendar, added a six-week summer session, and will not change to a four-quarter system until enrollment warrants. No conversion will be feasible financially without state aid for this purpose. The district stated that students and faculty have been far more positive than negative about a three-quarter calendar. The extent to which the faculty feels comfortable under the system depends upon the extent to which they had former experience with the quarter system.

San Diego College District, will continue to operate Community Colleges on a schedule of two semesters plus a summer session of at least eight weeks for the following reasons:

(a) The schedule will provide as effective utilization as could be achieved with the four-quarter system at this time.

(b) Conversion to the quarter system by San Diego State College has been delayed until funds are available for the purpose.

(c) San Diego Community College articulate with San Diego State College and surrounding secondary schools.

(d) An Econometric Model of the California Public Junior College Operating Year-Round indicates that maximum increased utilization expected under the quarter system would be 6.9 percent.[10]

Shasta College, in Redding (Shasta County) will convert to the quarter calendar when state colleges that serve most of its transfer students convert. Shasta considered year-round operation impractical for the following reasons:

1. Rural Northern California college students would be required to change summer work patterns before a full summer quarter would be feasible.

2 Enrollment at Shasta College would need to be greater in order to sustain a balanced enrollment during the summer quarter.

Orange Coast College District, with colleges in Huntington Beach and Costa Mesa, will continue to operate under the present, very successful, two-semester plus summer-session plan until evidence justifies a change of calendar.

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[10] James W. Keene. An Econometric Model of the California Public Junior College Operation Year-Round. (Sacramento: State Department of Education, 1967), p. 103.

Merritt College, in Oakland (Peralta College District) was on the quarter system and was considering whether to go to four quarters or three quarters and a summer session. It will be some years before the Merritt College converts to year-round operation in the broad sense.

Ventura College enrollment in summer sessions included about one-third of spring term day enrollments. Approximately one-third of summer session students continued in the fall semester. The district felt that, with this degree of attrition, it would be extremely difficult to arrange schedules, vacations, and to estimate and employ faculty on a contractual basis for the summer quarter.

Mt. San Antonio College, (in Walnut, near Pomona) stated that studies of the quarter system of school organization versus the semester system compared summer session with the summer quarter.

> It is usually implied that the summer quarter will have a greater enrollment than a summer session, and this is purportedly substantiated by the fact that the increase in enrollment in summer session from one year to the next is less than that of the fall semester.[11]

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[11] Letter from Mt. San Antonio Community College District, July 3, 1969.

Mt. San Antonio College also stated that the following factors would affect summer session enrollments more profoundly than increases in fall semester:

(a) Changes in selective service laws.

(b) Changes in general education or breadth requirements.

(c) Changes in labor requirements.

(d) Economic state of the community.

SIZE TO SUPPORT YEAR-ROUND OPERATION

In its study, the Coordinating Council staff indicated "when instituted after cost-benefit analyses, in a judicious manner on campuses of sufficient size, summer terms potentially are able to accommodate a proportion of the annual enrollment demand.[12]

Any study of year-round operation, therefore, must of necessity concern itself with the size which is sufficient for effective summer term operation. It follows that below that point in size, institutions need not be concerned with conversion to year-round operation.

The University of California, stating that the purpose of having summer quarter (year-round operation) was to utilize regular university instructional facilities during the entire year by allowing matriculated students to make normal progress towards their degrees, has reported that year-round operation began in Berkeley in 1967-68, at Los Angeles the following year, and is programmed to commence at Irvine in 1970-71. Summer quarters were scheduled to begin in 1971-72 in San Diego, 1972-73 in Santa Barbara and Santa Cruz, and 1973-74 in Davis and Riverside. Enrollment for the summer quarter for the first year of operation was estimated at 20 percent of three-quarters average enrollment, except for Davis and Santa Barbara where the estimate was 25 percent. Yearly increases of 5 percent to a maximum of 40 percent of three-quarters enrollment have been programmed.[13]

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[12] CCHE. Meeting the Enrollment Demand For Public Higher Education in California Through 1977. (Sacramento: Staff Report, February 3-4, 1969), p. 1-4.

The projected average enrollment for the campuses in the year of conversion were: 1970-71, Irvine (5225); 1971-72, San Diego (6000); 1972-73, Santa Cruz (5035); 1973-74, Davis (14,255), and 1973-74, Riverside (8133).[14]

An analysis of enrollment data of the California State College, Hayward, indicated that in its fourth year of operation, when the average academic year enrollment was

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[13] The University of California 1970-71 Budget for Current Operation and Five-year Fiscal Program, (Berkeley, September 19, 1969), pp. 24-25.

[14] Ibid., Table: Comparative Summary of Enrollment - Head Count, pp. 82-83.

5,253, the summer quarter enrollment exceeded 40 percent for the first time.[15] A general indication was that, if the summer term enrollment can equal 40 percent of the fall term enrollment, a satisfactory basis for operation is achieved.

Chabot's experience in Hayward (South County Junior College District) led to the conclusion that its 1967 enrollment of 5,430 was not sufficient for year-round operation and that a substantial increase in enrollment would be necessary before such operation could be instituted. Continued operation of summer quarters at Hayward State College and the University of California at Berkeley may lead Community Colleges to an earlier consideration of year-round operation.

Southwestern College in Chula Vista stated that year-round operation is not feasible since projections indicate that student enrollments during the summer would not be sufficient to support full operation during that quarter. The 1967-68 fall enrollment of Southwestern was 2,765.

Antelope Valley College in Lancaster with an enrollment in the fall of 1967 of 1,477, studied year-round operation in

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[15] Touche and others, Evaluation of Year-Round Operations at the University of California and the California State College. (Sacramento: Coordinating Council for Higher Education, 1968), Exhibit 1.

January 1968 and concluded that its size precluded conversion to year-round operation.

Palomar College in San Marcos in Northern San Diego County concluded that it would not be able to offer every course every semester and, therefore, could not operate year-round. The average daily attendance for Palomar was 2,946 in 1966-67 and 3.441 in 1967-68.

San Joaquin Delta College in Stockton stated that large colleges with a minimum of 10,000 enrollment would be necessary to provide enough demand to justify the offering of beginning courses each quarter.

No California Community College was on actual year-round operation. Several operate 48 weeks through regular terms plus summer session, such as Los Angeles City (10,233), East Los Angeles (5,768), Los Angeles Valley (9,019), and Los Angeles Southwest (647), all in the Los Angeles Community College District, whose total enrollment in 1967-68 was 42,971. Cerritos in Norwalk (7,148), Ventura (3,824), Long Beach (9,347), and Pasadena (8, 110) colleges also used their facilities 48 weeks.

BALANCED ENROLLMENT

Enrollments would need to be balanced among the regular terms. The problem of most Community Colleges has been expressed by San Joaquin Delta College.

> The goal of equal enrollment for each quarter and equal opportunities for starting a college program with any quarter in the sequence which is expressed by some of the proponents is highly unrealistic under present customs and modes. We are not even close to such a goal under the semester system. The attrition in enrollment we experience between the fall and spring semesters is a good example of how far we are from the goal of equal enrollment.[16]

Much ingenuity, thought, and research needs to be applied to the problem of influencing enrollment patterns by incentives rather than by strictures.[17] True year-round operation may not be possible immediately in many Community Colleges because control over the enrollments and attendance is not available as a device to achieve balance of enrollment among terms. Community Colleges must admit students that can profit by the instruction.

The State Center College District in the Fresno area stated that approximately two-thirds of the students presently transferring from Reedley College and Fresno City College to four-year institutions attended Fresno State College, which is on the semester system. Mid-year transfer of students between Fresno State College and the State Center District were as follows: 200 students

[16] Study on the Quarter System and Year-Round Operation (Stockton: San Joaquin Delta College, October 1967), p. 18.

[17] Keene, An Econometric Model, op. cit., p. 128.

transferred from Fresno City College and Reedley College to Fresno State College between semesters; mid-year transfers from Fresno State College to Fresno City College and Reedley College were approximately 130. The district will consider changing when Fresno State College changes.

FORCED ENROLLMENT

In attempts to balance enrollments in year-round operation, the question evolved: can additional students be required to attend summer terms? Balanced enrollment did not seem possible without some control. Shasta College has stated that if the calendar were to go to year-round operation, unless there were some sort of forced attendance pattern, it would be difficult to have a balanced enrollment among quarters to make a year-round operation feasible financially. Increased utilization will not produce additional students from secondary schools. Therefore, a balance of enrollment among the semesters could be achieved by controlled registration and possibly could be achieved to some extent by inducements.

In order to make year-round operation feasible, Chabot College in Hayward stated that changed patterns of student attendance will have to result from some means so that the Community College will control admission of students in particular quarters. San Joaquin Delta College in Stockton has concluded that balanced enrollment is not likely to happen in practice unless the college limits its fall enrollment, which would forfeit its open-door policy. Other devices would have to be used to promote or restrain enrollment.

Unless the college finds ways to regulate enrollment, it does not seem likely that year-round operation will be achieved. The Los Angeles Report concluded that balancing of the summer quarter with other quarters should "come through advice and allurement, not by compulsory regulation."[18]

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[18] Reiter, op. cit., p. 79.

COST FACTORS

In citing the potential savings to be achieved by year-round operation of community colleges, the Coordinating Council staff referred to a report by the independent management consulting firm of Touche, Ross, Bailey and Smart of San Francisco on evaluation of year-round operation at the University of California and the California State College.[19]

Although the report did not consider application to the community colleges, the Coordinating Council staff stated,

> The findings of the investigation are clearly applicable and are so assumed in this report.[20]

However the Touche, Ross, Bailey and Smart report noted that:

> There are differences between the segments and between the campuses and colleges within the segment. In fact, depending upon campus or college policy, the advantages of conversion to year-round operation can be great or non-existent on an individual campus.[21]

In view of the similarity of students between the State Colleges and University compared to Community College students, and in view of the differences between Community College students and those in four-year institutions of

[19] Touche and others, op. cit.

[20] CCHE, op. cit., p. I-4.

[21] Touche and others, op. cit., p. 4.

higher education in California, as delineated in separate studies by Tillery and Cross,[22] applicability of the Touche, Ross findings to Community Colleges did not appear to be readily apparent.

A second assumption in the Touche, Ross study was that

> Under year-round operation, each segment will serve the same community of students as projected for it under operation for an academic year.[23]

Differences between Community College students and those in the State Colleges and University and differences in designated functions among the three segments of public higher education were sufficiently significant that findings from investigations of the State Colleges and University did not appear to be applicable to the Community Colleges.[24]

Year-round operation with a summer program comparable to that of other terms, with reduced per-credit-hour operating costs, and with savings in capital outlay for buildings, did not appear feasible for any institution until it has reached a point where it cannot accept all qualified

[22] Dale Tillery, A Preliminary Report on the University-Eligible Student Attending a Junior College or the University of California (Berkeley: Junior College Leadership Program, 1964). K. Patricia Cross, "Higher Education's Newest Students, "Proceedings Western Regional Conference on Testing Problems, May, 1968, pp. 22-33.

[23] Touche and others, op. cit., p. 3.

[24] Conclusions of the report by Touche (and others) did not result from studies, visits, examinations, or considerations of California Community Colleges.

applicants for the fall period or until that point is in prospect for the near future.[25]

In the Los Angeles study a review of the literature led to the conclusion that few Community Colleges had been in operation long enough to be analyzed in respect to increased enrollments and corresponding savings in cost.[26]

A Diablo Valley College study developed estimates of costs for three systems of extended usage:

(1) three quarters plus a six-week summer session

(2) four quarters with a summer quarter enrollment 30 percent of a regular quarter

(3) four equal quarters

Calculations were based on the 1966-67 budget and projected enrollment. Additional costs were computed for the three quarters plus summer session at $15,800. For the four quarters with summer quarter enrollment approximating 30 percent of the others, added costs were $273,900 and for the four quarters of equal size, $968,550.[27]

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[25] W. Hugh Stickler and Milton W. Carothers, The Year-Round Calendar in Operation (Atlanta: Southern Regional Education Board, 1963), VI.

[26] John Reiter, Survey: Year-Round Utilization of College Facilities (Los Angeles City Schools, 1965), p. 3.

[27] A Study of the Implications of the Quarter System fr Diablo Valley College, Diablo Valley College, 1966, p. 27.

In a South County College District report computations indicated that there would be an additional cost of $64,700, a 2.7 percent increase of the total budget, and a 5.1 percent increase of current expense of education for the district to operate three quarters plus summer school. The report also estimated that there would be an additional $310,200 needed to operate four quarters. This computation represented increases of 13.0 percent in the total budget and 24.8 percent in current expenses of education.[28]

The district concluded that an additional net amount of $1,250,000 would be required at the existing level of operation, the bulk coming from the requirement of additional full-time faculty and the additional offerings that would have had to be provided throughout the year, to meet the conditions of year-round operation.

There appeared to be a serious question as to savings in operational cost versus capital outlay expenditures in year-round operation:

> The only advantage from a cost-standpoint which is attributed to the quarter plan is in the area of capital outlay due to year-round operation. . .Most studies of operational costs point out that full implementation of the four-quarter system results in considerable additional cost.[29]

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[28] John T. McCuen, "Problems and Benefits of the Quarter System and Year-Round Operations Based on the Quarter System." (Hayward: A report to the Board of Trustees, South County Joint Junior College District, 1964). p. 11.

[29] Keene, An Econometric Model, op. cit., p. 9.

Community Colleges on the quarter calendar have demonstrated that economies accruing from year-round utilization of facilities could be most doubtful:

> Full year-round operation requires that course offerings be available so that students may enter any program in any quarter. Each level of sequence-type course would have to be available each term.[30]

In computation of possible additional costs of year-round operation, the following were hidden factors to be considered:

> 1. The period of time for which major maintenance and overhaul of facilities takes place. If major work must be done with a larger work force, or on Saturday and holidays with the payment of overtime, such costs are significant factors.
>
> 2. Certain classrooms and facilities become uncomfortably warm on late afternoons on hot days, and the cost of air conditioning can be a significant factor.
>
> 3. There is a serious operations implication inherent in a four-quarter school year. Building repairs, maintenance, painting and cleaning, to just mention a few functions, could be complicated and might cause harmful interruptions in the school program"[31]

A need for additional research was noted on the actual cost of operation for year-round operation and for summer sessions in comparison with other terms. The Touche study found that not all summer term operation was at reduced cost:

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[30] Study on the Quarter System and Year-Round Operation, (Stockton: San Joaquin Delta College, October 1967), p. 23.

[31] Preliminary Study of the College Calendar Implications of the Quarter System. (Santa Rosa: Santa Rosa College, December, 1967), p. 23.

> However, the results of testing Assumption 9., which predicts the effect of YRO on operating costs, indicate that the cost of operating a summer quarter at some campuses is higher than the cost of an academic quarter. If this difference in operating cost is larger than the savings incurred by reduced capital outlays, the net result will be a higher cost to the State.[32]

Difficulty in computing costs for summer session operation has been cited:

> In general, operating costs at both segments (colleges and university) are variable with enrollment and length of calendar, and are budgeted on that basis. However, certain deviations from this basic condition have been identified which help to explain the diversity of results experienced at individual campuses and colleges
>
> Certain costs are considered semi-fixed and are not fully budgeted in the summer quarter. These costs are general administration, library, and plant operation. Another exception to the assumption involves cycling costs, which are the recurring costs which vary as a function of operating three quarters rather than two semesters for the regular academic year.
>
> At the University, the reduced scope and breadth of the summer quarter, plus the reduction of the fixed costs results in a lower budgeting cost/FTE (full time equivalent) in the summer quarter. At CSCH (California State College at Hayward), higher faculty costs caused by wide scope and breadth of summer quarter, and lower enrollment, are offset by the lack of need to budget for fixed costs already covered by the academic year budget. This results in a lower total cost/FTE. CSCLA (California State College at Los Angeles) also budgets lower fixed costs in the summer quarter, but the wide scope and breadth of courses results in increased total cost/FTE.[33]

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[32] Touche and others, op cit., pp. 11-42.

[33] Ibid., p. 19

The need for clear definitions and for delineation of functions and service was apparent if true costs of operation of the summer term, and thereby year-round operation, were to be derived. Research, which will require such clarification, was needed.

FINANCING

The method of financing education in California was considered an obstacle to the institution of year-round operation in Community Colleges, cited as follows:

> Financial support of the summer quarter or session is a key problem. Legislative analyst's office indicates that budget support for the summer quarter should not come from reducing the expenses of the normal three quarters' operation.[34]
>
> Under the semester system, summer sessions are on an hourly basis; under the quarter system, the fourth quarter is a part of the summer year. Therefore, a new basis for state aid will be needed.[35]
>
> The revenue from the state, by virtue of increased ADA would not be sufficient to cover the increased cost of year-round operations. It is not likely that more than 25 percent of this additional cost would be received from sources outside of district taxes. Therefore, it must be noted that any savings resulting from greater efficiency of plant utilization would be offset (to an extent undertermined at this time) by the increased costs of operations.[36]

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[34] Analysis of the Budget Bill of the State of California for the Fiscal Year July 1, 1969, to June 30, 1970. Report of the Legislative Analyst to the Joint Legislative Budget Committee, 1969, p. 325.

[35] Quarter Report, Cerritos College, (December 1967). p. 17.

[36] South County Joint Junior College District. "Quarter System and Year-Round Operation" Report to Board of Trustees. December, 1967, p. 4.

> San Bernardino Valley College would not take on any change in its calendar that would result in higher total costs without being assured of adequate financing.[37]

The Council Staff report found that under year-round operation, facilities would be sufficient to house a certain percentage of additional students, thereby extending the period of time before new construction would be needed. Such savings were assumed, apparently, to be automatic savings.

A study of rising costs in the *Engineering News Record Index* for the past 25 years indicated that any delay in construction must result in either

1. a considerable increase in cost for the same amount of facilities
2. fewer facilities for the amount of money available. The same observations were applicable to acquisition of sites.

To save funds, the state should permit districts to purchase sites and to construct buildings well in advance of need, providing that districts are able to finance projects. The state should contribute its proportionate share subsequently when the construction or site acquisition is approved as a project. This procedure would permit districts to acquire sites at the lowest cost and to build buildings in large enough increments to secure the best available bids.

[37] R. F. Ellerman, Superintendent, letter, *San Bernardino Valley College Report* (July 11, 1969).

The district would then have utilization of the buildings for a longer period of time, and the state, in meeting its share of the cost, would have a lower amount to contribute.

GAIN IN ENROLLMENT CAPACITY

In January 1964 the Coordinating Council determined that the four-quarter system for year-round operation was best for public higher education and recommended that ". . .each Community College Governing Board. . .determine the advisability of conversion to a four-quarter calendar."[38]

Dr. James W. Keene, formerly executive secretary, Junior College Advisory Panel to the State Department of Education and now Director of Research at San Joaquin Delta College, has expressed concern about the Council staff report. According to Keene, statements were made in the Council staff report to the effect that Community Colleges would increase their capacity by 13.33 percent by shifting to year-round (four-quarter) operation, assuming a summer quarter enrollment would be 40 percent.

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[38] A Comparison of Trimester and Four-Quarter Calendars for Year-Round Operation of Public Higher Education in California. (Sacramento: Coordinating Council for Higher Education. February 1964). p.iii.

> At the outset we must recognize that most Community Colleges are now operating summer sessions. . .Any gain resulting from year-round operations would have to be measured as a gain above present summer sessions ADA. To put it another way, a shift to full year-round operations involves abandonment of summer sessions.[39]

Dr. Keene computed a theoretical gain in capacity through shifting to year-round operation in 12 California Community Colleges using actual enrollment data. Dr. Keene stated that,

> With 40 percent of the students electing to attend year-round, one college showed 8.52 percent gain, and so on for a median gain of 4.53 percent. Since this approaches the percent gain expected by operating a summer session, I must conclude that no significant gains in plant utilization can be expected in the median of California Community Colleges by shifting to year-round operations when summer quarter enrollment is approximately 40 percent of the fall term enrollment... The CCHE staff has consistently drawn conclusions relative to gains on a no-attrition model of a four-year institution and assumed that those same conclusions applied to two-year colleges. At no time has the staff recognized that the four-year college model is completely invalid for the two-year colleges.[40]

Dr. Keene concluded

> that gains to be expected by shifting the Community Colleges to year-round operations in the present circumstances have been proven to be largely mythical when real data and realistic assumptions have been applied.[41]

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[39] James W. Keene, letter to California Junior College Association, January 30, 1969. p. 1.

[40] Keene, An Econometric Model, op. cit. p. 103.

[41] Keene, letter, op. cit., p. 2.

The San Diego City School District developed a report in 1961, citing a study by Wayne State University, which had engaged in a series of experiments since 1958 relating to calendars and schedules.[42] According to Wayne State, experience of other institutions had been of limited value, inasmuch as no institution made complete use of the calendar year. Because of these factors, the Wayne State report emphasized that, as far as "complete" utilization of time, students, faculty, plant and facilities were concerned, the summer session "is of real value only when the student can plan a complete program." The Wayne State study developed a relative efficiency figure. At an index of 100 for utilization of plant under two-semester plus-summer calendar, the quarter calendar would achieve an index of 115.[43] This corresponds to the Council staff calculated gain of 13.33 percent; i.e., an index of 113.33.[44]

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[42] Extending the School Calendar at the Junior College Level. (San Diego: Research Department, San Diego City Schools, 1961), p. 51.

[43] Wayne State University. Report of the Committee to Study the Operation of the Quarter System. 1962-65 (Detroit: Wayne State University, 1966).

[44] CCHE, Meeting the Enrollment Demand, op. cit., p. VI-14.

In developing its study, the Coordinating Council staff found

> The data shows that when the summer term enrollment is 40 percent of the fall term enrollment....year-round operation is estimated to potentially reduce the additional day-graded student enrollment capacity required in California for 1977 from 145,111 to 91,271--a reduction of 37 percent.[45]

The computed reduction did not take into consideration the extent of the use of facilities for existing summer sessions. The computed gain in student enrollment capacity would have to be reduced by the existing summer term enrollment to derive a net gain. Gains that might be expected were computed, based on actual district enrollment, for each district if it:

(1) operated its summer sessions with a summer term enrollment equal to 40 percent of the largest enrollment of regular term

(2) operated a summer term of whatever weeks would be necessary to total 48 weeks of operation with the enrollment equal to 40 percent of the largest enrollment of regular terms, and

(3) operated year-round at rated capacity with the summer enrollment equal to 40 percent of rated capacity.

The latter analysis assumed that the proper mix of physical facilities had been attained and that it matched the mix of enrollment; i.e., curriculum and enrollment were precisely balanced with the facilities at each individual college, and that the facilities were used exactly as established standards. How closely a college, district, or region can actually come to this theoretical standard is highly conjectural and should be subject to study. The results are shown in Table III.

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[45] Ibid., p. VI-12.

Table III

Relative ratios between actual-, computed summer session-, and computed summer quarters with 40% enrollment-, capacity for California Community Colleges, 1967-68.

District and/or College	Calendar	Weeks Oper.	Enrollment 1967-68 1Q/1S (1)	2Q/2S (2)	3Q (3)	4Q/SS (4)	%4Q or SS/Fall (5)	Ave./Wk. Oper. (6)	Util. Ratio (7)	Summer Sess. at 40% Util. (8)	Net Gain (9)	% Gain (10)	Year-Round Oper. Util. (11)	Net Gain (12)	% Gain (13)
1. ALLAN HANCOCK	2+6	42	2010	1777	–	1046	52	1772	772	757	(015)	(1.9)	922	150	19.4
2. ANTELOPE VALLEY	2+9	45	1477	1358	–	652	44	1260	800	796	(004)	(0.5)	817	017	2.1
3. BARSTOW	2+6	42	368	298	–	214	58	316	751	729	(022)	(2.9)	779	028	3.7
4. BUTTE	3Q+6	a													
5. CABRILLO	2+6	42	3545	3323	–	1349	38	3136	774	776	002	0.3	827	053	6.8
6. CERRITOS	2+12	48	6986	7148	–	1570	22	5692	796	841	045	5.4	841	045	5.4
7. CHAFFEY	2+6	42	3385	3249	–	600	18	2929	757	785	028	3.7	954	197	26.0
8. CITRUS	2+6	42	2416	2397	–	308	13	2107	763	797	034	4.5	847	084	11.0
9. COACHELLA VALLEY	2+6	42	1316	1293	–	863	66	1241	826	794	(032)	(3.9)	843	017	2.1
10. CONTRA COSTA	2+6	42	9211	8537	–	2624	28	7981	758	773	015	2.0	823	065	8.7
a Contra Costa	2+6	42	3272	3024	–	1249	38	2877	769	772	003	.04	822	053	6.9
b Diablo Valley	2+6	42	5939	5513	–	1375	23	5104	752	773	021	4.2	823	071	9.4
11. EL CAMINO	2+10	46	7336	6625	–	4061	55	6251	829	798	(031)	(3.7)	814	(015)	(1.8)
12. FOOTHILL	2+8	44f	8113	7484	–	4705	58	7236	818	788	(030)	(3.2)	821	003	0.4
a De Anza															
b Foothill															
13. FREMONT-NEWARK	4Q	48	780	727	757	398	51	666	817	808	(024)	(2.9)	826	009	1.1
14. GAVILAN	3Q+6	42	775	742	675	134	17	645	728	755	027	3.7	804	076	10.4
15. GLENDALE	2+6–9	42b	3080	2979	–	1763	57	2849	809	788	(021)	(2.6)	838	029	3.6
16. GROSSMONT	2+6–8	42b	5483	5275	–	1891	34	4881	779	786	007	0.9	836	057	7.3
17. HARTNELL	2+6+8	42b	2125	1869	–	374	18	1765	727	755	028	3.9	804	077	10.6
18. IMPERIAL	2+6	42	1806	1682	–	300	16	1538	745	774	029	3.9	824	079	10.6
19. KERN		c													
a Bakersfield	2+6	42	4796	4410	–	1202	25	4117	751	770	019	2.5	820	069	9.2
b Porterville	2+6	42	706	650	–	351	50	631	782	770	(012)	(1.5)	820	038	4.9
20. LONG BEACH	2+6+6	48	9347	8990	–	2973	32	8363	815	836	(021)	(2.6)	836	(021)	(2.6)
21. LOS ANGELES CITY		cd	42971	42523	–	18759	44	37083	863	830	(033)	(0.4)	837	(026)	(3.0)
a City College	2+12	48	10233	10161	–	6179	60	9193	898	847	(051)	(5.7)	847	(051)	(5.7)
b East L. A.	2+12	48	5768	5451	–	2147	37	4744	822	829	007	0.9	829	007	0.9
c Harbor	2+10	46	4462	4452	–	1631	37	3843	825	832	007	0.8	849	024	2.9
d Pierce	2+10	46	8150	7620	–	3022	37	6828	803	809	006	0.7	826	023	2.9
e Southwest	2+12	48	647	1129	–	556	49	805	713	690	(023)	(3.2)	690	(023)	(3.2)
f Trade-Tech	2+10	46	4692	4557	–	2141	46	4085	834	822	(012)	(1.4)	839	005	0.6
g Valley	2+12	48	9019	9153	–	3083	34	7585	829	844	015	1.8	844	015	1.8
22. DOS RIOS		d	12481	12182	–	6149	49	11207	823	808	(015)	(1.8)	841	018	2.2
a American River	2+8	44	5689	5703	–	2528	44	5120	823	816	(007)	(0.9)	849	026	3.2
b Sacramento City	2+8	44	6792	6479	–	3621	53	6087	822	799	(023)	(2.8)	833	011	1.3
23. MARIN	2+6	42	3652	3497	–	2162	59	3373	808	784	(024)	(3.0)	834	026	3.2
24. MERCED	2+6	42	1634	1538	–	296	18	1402	751	778	027	3.6	828	077	10.3
25. MONTEREY PENINSULA	2+8	44	2426	2349	–	1304	54	2191	828	803	(025)	(3.0)	838	010	1.2
26. MT. SAN ANTONIO	2+6	42	6652	5901	–	2679	40	5691	758	758	000	0	808	050	6.6
27. MT. SAN JACINTO	2+6	42	1076	1011	–	35	3	899	731	777	046	6.3	827	096	13.1
28. NORTH ORANGE COUNTY															
a Cypress		e													
b Fullerton	2+6–8	42	8956	8081	–	2900	32	7716	754	763	009	1.2	813	059	7.8
29. OCEANSIDE-CARLSBAD	2+6	42	1024	899	–	329	32	871	744	755	011	1.5	805	061	8.2

Table III

Relative ratios between actual-, computed summer session-, and computed summer quarters with 40% enrollment-, capacity for California Community Colleges, 1967-68.

District and/or College	Calendar	Weeks Oper.	Enrollment 1967-68				%4Q or SS/Fall	Ave./Wk. Oper.	Util. Ratio	Summer Sess. at 40%			Year-Round Oper.		
			1Q/1S	2Q/2S	3Q	4Q/SS				Util.	Net Gain	% Gain	Util.	Net Gain	% Gain
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
30. ORANGE COAST		d	8899	8436	–	4840	54	7952	821	797	(024)	(2.9)	831	010	1.2
a Golden West	2+0	36	2487	2246	0	0	0	2367	714	---	---	---	814	100	14.0
b Orange Coast	2+8	44	6412	6190	–	4840	75	6035	863	804	(059)	(6.8)	837	(026)	(3.0)
31. PALOMAR	2+6	42	2527	2253	–	787	31	2161	748	759	011	1.5	809	061	8.2
32. PALO VERDE	2+6	42	243	206	–	33	14	197	709	742	033	4.7	811	102	14.4
33. PASADENA	2+12	48	8110	7612	–	3712	46	6824	841	827	(014)	(2.0)	827	(014)	(2.0)
34. REDWOODS	3Q+4	40	2095	2128	2085	663	31	1959	767	775	008	1.0	841	074	9.6
35. RIVERSIDE	2+6	42	3783	3649	–	2504	66	3543	819	787	(032)	(3.9)	837	018	2.2
36. SADDLEBACK	3+6	a													
37. SAN BERNARDINO	2+6–8	42b	5025	4771	–	3450	69	4635	817	781	(036)	(4.5)	831	014	1.7
38. SAN DIEGO	2+8	44	13082	12950	–	4661	36	11533	808x	813	005	0.6	846	033	16.4
a City College	2+8	44	3765	3581	–	1360	36	3253	792	798	006	0.8	907	115	14.5
b Mesa	2+8	44	5419	5066	–	1924	36	4639	785	792	005	0.6	901	116	14.8
c (Evening)	2+8	44	3898	4303	–	1377	32	3641	776	789	013	1.7	897	121	15.6
39. SAN FRANCISCO	2+6	42	9765	9167	–	3364	34	8594	770	777	007	0.9	827	057	7.4
40. SAN JOAQUIN DELTA	2+6	42	4602	4336	–	2949	64	4252	808	778	(030)	(3.7)	828	020	2.4
41. SAN JOSE	2+6	42	4626	4289	–	1970	43	4102	776	773	(003)	(0.4)	823	047	6.1
42. SAN LUIS OBISPO	2+6	42	1363	1307	–	591	43	1229	789	784	(005)	(0.6)	835	046	5.8
43. SAN MATEO	2+6	42	8730	7744	–	4297	49	7674	769	758	(011)	(1.4)	807	038	4.9
44. SANTA ANA	2+8	44	2122	1984	–	794	37	1824	788	792	004	0.5	826	038	4.8
45. SANTA CLARITA		a													
46. SANTA MONICA	2+6	42	6835	6667	–	3403	50	6273	803	791	(012)	(1.5)	841	038	4.8
47. SEQUOIAS	2+0	36	2592	2331	–	----	--	2462	712	---	---	---	812	100	14.0
48. SHASTA	2+6	42	2377	2180	–	950	40	2089	769	769	000	---	819	050	6.5
49. SIERRA	2+6	42	1921	1773	–	875	46	1708	778	771	(007)	(0.9)	821	043	5.5
50. SONOMA	2+6	42	3155	2870	–	1703	54	2825	784	766	(018)	(2.3)	816	032	4.1
51. SOUTH COUNTY	3Q	36	5430	4826	4441	----	--	4899	677	---	---	---	777	100	14.8
52. STATE CENTER		cd	7303	7126	–	3386	46	6667	799	791	(008)	(1.0)	841	050	6.3
a Fresno City	2+6	42	5828	5798	–	3386	58	5466	821	798	(023)	(2.8)	848	027	3.3
b Reedley	2+0	36	1475	1328	–	----	--	1402	713	---	---	---	813	100	14.0
53. SWEETWATER	2+6	42	2765	2447	–	1148	42	2398	759	757	(002)	(0.3)	807	048	6.3
54. VENTURA	---	48	4996	4853	–	3005	61	4415	884x	839	(045)	(5.1)	839	(045)	(5.1)
a Moorpark	2+10	46	1168	1386	–	720	62	1156	799	774	(025)	(3.1)	791	(008)	(1.0)
b Ventura	2+12	48	3828	3467	–	2285	60	3307	864	815	(049)	(5.7)	815	(049)	(5.7)
55. WEST HILLS	2+0	36	694	608	–	----	--	651	704	---	---	1.9	824	120	17.0
56. WEST KERN	2+6	42	522	454	–	152	29	433	738	752	014	1.9	801	063	8.5
57. WEST VALLEY	2+6	42	3656	3497	–	978	27	3205	767	784	017	2.2	834	067	8.7
58. YOSEMITE	2+6	42	4079	3976	–	1499	37	3666	786	790	004	0.5	841	055	7.0
59. YUBA	2+6	42	2608	2581	–	1196	46	2395	804	796	008	(1.0)	846	042	5.2
60. PERALTA															
a Laney	2+6	42	3700	3700	–	800	22	3514	809	800	(009)	(1.1)	850	041	5.1
b Merritt	4Q	48	6400	5998	5885	3040	48	5331	833	814	(019)	(2.3)	814	(019)	(2.3)
61. COMPTON	2+6	42	2629	2624	–	802	31	2336	787	799	012	1.5	849	062	7.9
47. SEQUOIAS (1968-69)	2+6	42	2777	2532	–	451	16	2340	737	767	030	4.1	817	080	10.9
62. NAPA (1968-69)	2+6	42	1812	1691	–	702	39	2340	737	764	027	3.5	764	037	3.5
TOTALS			294564	279929	13843	120696	41	1602	773	779	006	0.8	825	052	6.7

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Explanatory Notes for Table III

Columns and Computations

Computations are based on figures provided by Community College districts.

Calendar. Expressed in semesters and weeks of summer session, except that "Q" indicates quarters; 6-8 indicates concurrent summer sessions of six and eight weeks; 6 + 4 indicates consecutive sessions of six and four weeks.

Columns 1, 2, 3, and 4. 1Q/1S. Indicates first quarter or semester, etc. 4Q/SS indicates fourth quarter or summer session.

Column 5 %4Q or SS/Fall. Percent the fourth quarter or summer session enrollment is of the fall term enrollment, i.e., Hancock:

1046 + 2010 = 52%

Column 6 Average per week operation. Computed by multiplying the enrollment by weeks of operation for each term and finding the mean, i.e., Hancock:

[(2010 x 18) + (1777 x 18) + (1046 x 6)] ++ 42= 1772

Column 7 Operational Ratio. Ratio of average enrollment per week of operation to the largest regular term enrollment, multiplied by ratio of weeks of actual operation to the 48 weeks of year-round operation, i.e., Hancock:

(1772.4 ÷ 2010) x 42 ÷ 48) = .772

Column 8 Operational Ratio with 40% SS. Same computation, assuming summer session enrollment at 40 percent of the largest regular term enrollment, i.e., Hancock;

Step A: 40% x 2010 = 804

Step B: (2010 x 18) + (1772 x 18) + (804 x 6) + 42 =1737.9

Step C: (1738 ÷ 2010) x (42 ÷ 48) = .757

Column 9 Net Gain. Gain or loss in operational ratio of assumed 40 percent summer enrollment to actual summer enrollment for weeks operated, i.e., Hancock:

.757 - .772 = (.015) (indicates loss since Hancock's summer term enrollment was greater than 40 percent)

Column 10 Percent Gain. Net gain or loss divided by actual operational ratio, i.e., Hancock:

.015 ÷ .772 equals (1.9%) (less since Hancock's summer term enrollment was greater than 40 percent)

Column 11 Operational Ratio to YRO. Same computation, assuming a summer term with enrollment at 40 percent of fall term enrollment for periods of weeks necessary to total 48 weeks of operation (year-round operation) i.e., Hancock:

Step A: 40% of 2010 = 804

Step B: (2010 x 18) + (1772 x 18) + (804 x 12) ÷ 48 = 1852.7

Step C: 1852.7 + 2010 = .922

Column 12 Net Gain to YRO. Gain or loss in operational ratio of assumed year-round operation to actual utilization ratio, i.e., Hancock:

.922 - .772 = .150

Column 13 Percent Gain to YRO. Net gain or loss in operational ratio of assumed year-round operation divided by actual operational ratio, i.e., Hancock:

.150 + .772 = 19.4%

This figure represents the computed percentage gain or loss in student enrollment capacity if a college or district moved toyear-round operation, assuming the same ratio between summer and fall term enrollments is maintained.

Explanatory Notes for Table III

a. Community College district not formed in 1967.

b. For purposes of computation the lower summer session weeks-of-operation figure was used. Actual capacity figures would be slightly higher, but not significantly.

c. For purposes of computation it was assumed students enrolled in summer session generated utilization of facilities in the same proportion as the length of summer session bore to the regular term.

d. District figures would have no significance because of distances between colleges; i.e., Bakersfield and Porterville Colleges are 50 miles apart.

e. District figures are given for purposes of comparison with the sum of the individual colleges in the district.

f. Cypress College not in operation in 1967.

g. District figures only provided.

h. District total varies from individual college computations because second semester enrollment exceeded the fall semester in each use.

Utilization of facilities by operation of a summer term or session were found to be extensive as shown in Tables III and IV. Seventy-five Community Colleges operated sessions averaging 7.03 weeks in length, enrolled 123,670 students, 40.9 percent of the fall term enrollment of 294,564. Seven colleges were not then in operation. Butte, Cypress of the North Orange County College District, Canada of the San Mateo College District, and Columbia in Sonora of the Yosemite College District, had plans to operate summer sessions. These colleges, plus the seven not included in the results, will have about the same utilization. The computed gain of capacity indicated in the Council staff report did not appear, therefore to consider actual utilization in order to derive a net gain.

TABLE IV

Summary of Community Colleges, Enrollments, and Duration of Summer Term Operation, 1967-68[a]

Number of Colleges	Weeks Operation	Fall Term Enrollment	Summer Enrollment	Ratio
4	0	10,086	-0-	-0-
1	4	2,095	663	31.6
44	6	149,334	59,410	39.8
10	8	44,636	22,453	50.3
1	9	1,477	652	44.1
5	10	25,808	11,575	44.9
10	12	61,118	25,943	42.4
75	--	294,564	120,696	40.9

Total Weeks Operated 527 Average Weeks Operated 7.03

Colleges not in operation (7) : Butte, Cypress, Saddleback
Santa Clarita, West Los Angeles,
Canada, Columbia

Colleges not included (7): Lassen, Rio Hondo, Santa Barbara,
San Diego Evening, Siskiyou, Solano,
Victor Valley

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[a] 1968-69 summer session figures used for Compton, Napa, Sequoias

Table V indicates that if Community Colleges had an enrollment in summer sessions of 40 percent that of the fall term, instead of the number actually enrolled, 36 would have gained in capacity and 36 would have lost in capacity. The maximum gain was 6.3 percent, the maximum loss 6.8 percent, and the median was zero.

Table VI shows that if the Community Colleges had operated a summer term of 12-weeks duration with an enrollment 40 percent of the fall term, only 10 would have had a computed increase in capacity of more than 11 percent. These ten included Hancock (2010 enrollment), West Hills (685 enrollment), Palo Verde (231 enrollment), and Reedley (1415 enrollment), all colleges too small in size to be able to operate year-round in a fiscally sound manner. Fifty-six would have gained from 0.4 percent to 11.0 percent. Eight would have had a decrease in capacity ranging up to 5.7 percent. The median gain for the 74 colleges was 5.3 percent instead of the computed 13.3 percent shown in the Council staff report.

TABLE V

Percentage Change (Gain or Loss) in Capacity of Facilities If Summer Session Enrollment Were 40% of Fall Term

71 California Community Colleges, 1967-68[a]

	Whole Number	Decimal 0	1	2	3	4	5	6	7	8	9	No. of Colleges
Gain	6				1							
	5					1						
	4		1	1			1		1			
	3			2			1	1	2		2	
	2			1			1	1				
	1	1		1			3					
	0	1			1		2	1	1	3	5	36
Loss	0				1	1	1	1			2	
	1	2	1			2	2			1	1	36
	2	1		2				1		2	2	
	3	2	1	1					2		2	
	4						1					
	5		1						2			
	6									1		

[a] 1968-69 capacity ratios used for Compton, Napa, and Sequoia Colleges.

TABLE VI

Percentage Change (Gain or Loss) in Capacity of Facilities Under Year-Round Operation if Summer Term Enrollments Were 40% of Fall Term, 75[a] California Community Colleges, 1967-68[b]

	Whole Number	Decimal										No. of Colleges
		0	1	2	3	4	5	6	7	8	9	
	Over 11											10
	11	1										
	10				1	1		2				
	9			1		1		1				
	8			2			1		1			
	7	1			1	1				1	1	
Gain	6		1		1		1	1	1	1	1	56
	5		1	1		1	1			1		
	4		1							2	2	
	3			2	1		1	1	1			
	2		2	1		1		1				
	1		1	1	1				1	1	2	
	0					2		1			1	
	0											
	1	1								1		8
	2	1			1							
Loss	3	1		1								
	4											
	5							2				

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SUMMARY

Los Angeles City School District with an enrollment of 38,619 in 1963-64 found that operation on a calendar of two semesters plus two summer sessions provided for the comparatively greatest average daily attendance at the lowest cost per a.d.a. of three alternatives considered for year-round operation.

Whether such conclusion would apply to smaller districts is not known although most district officials have so decided.

Twenty-six districts made studies of year-round operation. None converted to the quarter system. Only ten colleges were on a quarter calendar, including the five newest districts formed. Even those had different patterns of operation.

Of the 29 districts reporting not having made a study of operation, 19 are too small in size to warrant consideration of conversion in a fiscally sound manner.

Balanced enrollment was most difficult to obtain because of the prevailing pattern of once-a-year high school graduation and the unique characteristics of the community college student. Forced enrollment is contrary to the "open-door" policy of admission.

Conversion to year-round operation by the colleges or universities nearest to them will be the deciding factor for such conversion by the community colleges. Size necessary to support year-round operation appeared to be in excess of 5,250 average term enrollment.

Due to extensive use of facilities for summer sessions there would be maximum mean gain of 6.7 percent in capacity statewide.

If districts which were too small to be expected to operate economically a summer quarter was elinimated, the mean gain of the 20 districts remaining would be 3.2 percent.

In either event computation of gain is based on the assumption that every facility at each college is utilized at established standards. Even by the diverting or redirection of students, it was at best conjectural how close actual utilization could come to the theoretical utilization.

CHAPTER IV

ASSUMPTIONS RELATED TO EXTENSION OF HOURS OF INSTRUCTION IN CALIFORNIA COMMUNITY COLLEGES

Various assumptions have been made concerning the savings in higher education which may be realized through increased utilization of facilities by extending the hours of instruction. The staff of the Coordinating Council of Higher Education, for example, cited the additional enrollments to be accommodated through such extension.

Current standards for plant usage in higher education are based on a five-day week, 8:00 a.m. to 5:00 p.m., or a 45-hour week. Extended hours of instruction represents the scheduling of classes into the evening hours and on Saturdays.

Topics reviewed in this chapter on extended hours of instruction include: use of facilities for the total community college program, possible effect on those by extension of hours of instruction for graded students, extent of occupation-centered curricula, actual enrollment during extended hours, computed additional capacity of facilities, and computed gain that might be realized by extending the hours of instruction.

EXISTING USE OF FACILITIES

Assuming an institution-by-institution analysis of extending class offerings for day-graded students into the evening hours and Saturday, the existing extensive use of

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facilities in Community Colleges during these hours should be noted, not only for instruction in courses for credit, but also other purposes of the Community Colleges.

Partial extent of such usage was indicated in Tables VII and VIII. Table VII shows that in 1967-68 the Community Colleges offered 1,905 occupation-centered curriculums of which 1,219 were offered in the evening. In 1968 the number of such curriculums had increased to 2,255, with a proportionate increase in the evening program. Table VII shows colleges reporting an enrollment in the extended day and evening classes of 199,586 in the fall semester and 204,013 in the spring semester. For purposes of comparison the fall 1967 enrollment in the day program for all colleges was reported by the Council staff to be 302,141.

Other uses of Community College facilities for example, include apprenticeship training programs, non-credit courses, forum series, community services, and continuing education.

Instruction in many vocational classes has been given frequently in extended day and evening programs because those who need this instruction were employed and usually unable to attend during day hours. These kind of programs often required specialized facilities, financing of which should be provided in the Junior College Construction Act.[1]

[1] Education Code, Chapter 18, Junior College Construction Act. Section 200010-20083.

The Act provides for state assistance in funding approved projects. Growth in the actual or estimated contact hours of students enrolled in graded classes scheduled to commence before the hour of 4:30 p.m. has been a factor in computing district entitlement.[2] Therefore, the needs of extended day and evening classes have not been considered.

A number of the Community College districts have assumed full responsibility for adult education and have utilized off-campus as well as on-campus facilities for such instruction.

State and federal agencies have requested Community College districts to add vocational instruction for adults in special programs requiring special facilities.

OCCUPATION-CENTERED CURRICULA

Community Colleges in California have expanded occupation-centered curricula, and many of these courses are offered in both day and evening programs. Table VII shows the number of curricula in eight different classifications, the number of curricula offered during the day, evening, and both day and evening sessions, for each college.

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[2] Education Code. Sec. 20017, 20022.

In 1967-68, the Community Colleges offered 702 occupation-centered curricula exclusively in the day program, 182 curricula exclusively in the evening program, and 1,037 in both day and evening programs. Of the 1,905 curricula offered, 64 percent, or 1,219, were offered in the evening session. San Bernardino Valley offered 33 such curricula in the evening, Long Beach 43, and Community Colleges in the Los Angeles system offered 92 separate curricula of a total of 195 in the day and evening programs. Los Angeles offered 54 district curricula of a total of 178 offered on its campuses.[3]

Extended day and evening portions of Community College programs are being offered by almost all Community Colleges.[4] Department of Finance projected enrollments included only day-graded students taking courses for credit between the hours of 8:00 a.m. and 5:00 p.m.

If the recommended extended utilization of facilities for day-graded students taking courses for credit was implemented, what effect would there be on extensive occupational-centered and other programs? When a facility is used for non-credit function, recognition and acknowledgement should be given that the facility is, in fact, being utilized fully.

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[3] A Guide for California Public Community Colleges (Sacramento: California Community College , 1968), p. 115-128.

[4] Loc. cit.

During 1970 the Board of Governors will be undertaking a comprehensive study of total utilization of Community College facilities. Only then will there be a definitive knowledge of actual usage, from which conclusions may be drawn as to how utilization might be improved.

TABLE VII

OCCUPATION-CENTERED CURRICULA OFFERED IN DAY AND EVENING PROGRAMS, CALIFORNIA COMMUNITY COLLEGES, 1967-68

District and/or College		Curricula										Totals by College			
		1. A-H+F	2. A+GA	3. B+OO	4. HS	5. HE	6. P+PSO	7. T	8. T+I	9. D	10. E	11. B	12. Tot.	13. Even.	14. Tot.-1968
1.	ALLAN HANCOCK	0	0	5	3	0	3	4	4	0	0	19	19	19	22
2.	ANTELOPE VALLEY	0	0	5	1	2	2	3	1	2	1	11	14	12	14
3.	BARSTOW	0	0	4	1	0	2	4	2	4	5	4	13	9	13
4.	BUTTE	4	0	0	0	0	0	0	0	4	0	0	4	0	15
5.	CABRILLO	0	0	7	4	0	3	6	2	3	5	14	22	19	24
6.	CERRITOS	0	0	9	4	1	2	10	5	2	0	29	31	29	39
7.	CHAFFEY	0	4	8	4	1	2	6	3	13	3	12	28	15	37
8.	CITRUS	1	3	9	3	0	1	7	2	17	2	7	26	9	31
9.	COACHELLA VALLEY	5	2	3	2	0	1	6	4	17	3	3	23	6	26
10.	COMPTON	0	2	7	3	0	3	3	3	3	3	15	21	18	24
11.	CONTRA COSTA	(0)	(1)	(9)	(5)	(0)	(3)	(8)	(7)	-	-	-	(33)	(13)	
	a. Contra Costa	0	0	7	3	0	2	6	7	13	2	10	25	12	27
	b. Diablo Valley	0	1	7	4	0	3	5	0	7	4	9	20	13	25
12.	EL CAMINO	0	4	6	4	1	3	8	7	10	2	21	33	23	41
13.	FOOTHILL	(0)	(4)	(10)	(7)	(0)	(4)	(9)	(2)	-	-	-	(33)	(24)	
	a. De Anza	0	1	6	3	0	3	7	2	4	2	16	22	18	22
	b. Foothill	0	4	7	4	0	2	6	0	3	3	17	23	20	24
14.	FREMONT-NEWARK	0	0	5	0	0	1	3	0	0	2	7	9	9	10
15.	GAVILAN	0	0	1	0	0	3	3	1	7	0	1	8	1	9
16.	GLENDALE	0	6	11	1	0	2	7	3	16	2	12	30	14	34
17.	GROSSMONT	0	3	6	2	0	2	5	1	1	0	18	19	18	21
18.	HARTNELL	4	0	5	2	1	2	2	9	6	1	18	25	19	25
19.	IMPERIAL VALLEY	5	0	5	1	0	3	1	1	1	0	15	16	15	16
20.	KERN	(5)	(1)	(9)	(2)	(0)	(3)	(4)	(7)	-	-	-	(31)	(13)	
	a. Bakersfield	4	1	8	2	0	3	4	6	18	0	10	28	10	34
	b. Porterville	4	0	5	1	0	0	1	3	6	1	7	14	8	15
21.	LASSEN	3	0	3	0	0	1	0	1	4	0	4	8	4	13
22.	LONG BEACH	0	3	12	5	1	2	10	16	6	1	42	49	43	53
	a. East	0	4	7	4	1	3	4	0	2	0	21	23	21	28
23.	LOS ANGELES	(7)	(9)	(16)	(6)	(1)	(9)	(25)	(19)	-	-	-	(92)	(54)	
	a. East	0	4	7	4	1	3	4	0	2	0	21	23	21	28
	b. City	0	7	15	3	1	2	8	1	3	2	32	37	34	53
	c. Harbor	0	2	6	2	1	4	12	4	2	3	26	31	29	38
	d. Pierce	15	4	5	0	0	1	11	3	8	0	31	39	31	50
	e. Southwest	-	-	-	-	-	-	-	-	-	-	-	-	-	0

TABLE VII (CONTINUED)

	District and/or College	Curricula 1. A-H+F	2. A+GA	3. B+OO	4. HS	5. HE	6. P+PSO	7. T	8. T+I	9. D	10. E	Totals by College 11. B	12. Tot.	13. Even.	14. Tot.-1968
23.	f. Trade-Tech	0	4	8	1	0	1	7	18	0	5	34	39	39	65
	g. Valley	0	5	5	2	1	3	8	2	2	6	18	26	24	25
24.	LOS RIOS	(3)	(3)	(9)	(2)	(1)	(5)	(8)	(9)	-	-	-	(40)	(26)	
	a. American River	3	1	9	0	1	2	6	6	19	3	6	28	9	30
	b. Sacramento City	0	2	8	2	0	3	5	3	15	0	8	23	8	31
25.	MARIN	0	1	9	3	0	3	4	3	16	1	6	23	7	24
26.	MERCED	0	0	4	2	0	2	3	2	2	2	9	13	11	14
27.	MONTEREY PENINSULA	0	0	5	2	0	1	3	0	2	0	9	11	9	12
28.	MT. SAN ANTONIO	4	2	9	4	1	4	8	3	18	5	14	35	19	49
29.	MT. SAN JACINTO	2	1	3	1	0	2	1	2	2	4	6	12	10	12
30.	NAPA	1	1	6	1	0	4	2	3	6	0	12	18	12	19
31.	NORTH ORANGE	(1)	(5)	(11)	(7)	(1)	(4)	(10)	(4)	-	-	-	(43)	(17)	
	a. Cypress	0	0	6	0	0	0	2	0	0	0	8	8	8	8
	b. Fullerton	1	5	11	7	1	4	9	4	25	2	15	42	17	42
32.	OCEANSIDE-CARLSBAD	3	0	4	1	0	2	2	0	6	3	3	12	6	12
33.	ORANGE COAST	(5)	(4)	(11)	(6)	(1)	(5)	(11)	(4)	-	-	-	(47)	(17)	
	a. Golden West	0	1	5	0	0	2	1	0	9	0	0	9	0	12
	b. Orange Coast	5	4	11	6	1	3	11	4	28	5	12	45	17	68
34.	PALO VERDE	2	0	4	0	0	1	0	1	2	0	6	8	6	8
35.	PALOMAR	0	5	7	1	0	3	4	4	0	7	17	24	24	27
36.	PASADENA	0	7	9	5	1	6	9	4	18	3	20	41	23	49
37.	PERALTA	(1)	(3)	(9)	(6)	(1)	(6)	(12)	(16)	-	-	-	(54)	(29)	
	a. Laney	0	3	0	3	1	1	10	15	11	4	18	33	22	34
	b. Merritt	1	0	9	3	0	5	3	5	11	1	14	26	15	30
38.	REDWOODS	2	1	7	1	0	3	6	6	2	12	12	26	24	28
39.	RIO HONDO	0	1	7	2	0	7	7	3	5	5	17	27	22	34
40.	RIVERSIDE	0	3	7	2	1	3	6	1	6	0	17	23	17	25
41.	SADDLEBACK	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42.	SAN BERNARDINO VALLEY	4	2	8	4	0	5	6	7	3	4	29	36	33	58
43.	SAN DIEGO	(1)	(7)	(12)	(4)	(1)	(5)	(12)	(11)	-	-	-	(53)	(30)	
	a. San Diego City	0	6	8	0	0	4	7	10	18	1	16	35	17	45
	b. San Diego Mesa	1	0	7	4	1	1	8	1	12	0	11	23	11	24
	c. San Diego Evening	0	2	12	0	1	3	7	1	0	7	19	26	26	36
44.	SAN FRANCISCO	3	3	10	5	0	4	6	2	31	1	0	33	1	36

TABLE VII (CONCLUDED)

District and/or College		Curricula										Totals by College			
		1. A-H+F	2. A+GA	3. B+OO	4. HS	5. HE	6. P+PSO	7. T	8. T+I	9. D	10. E	11. B	12. Tot.	13. Even.	14. Tot.-1968
45.	SAN JOAQUIN DELTA	4	6	7	2	1	1	6	3	22	2	6	30	8	34
46.	SAN JOSE	0	0	8	4	0	5	4	5	13	4	9	26	13	27
47.	SAN LUIS OBISPO	0	0	4	2	0	3	4	2	1	3	11	15	14	16
48.	SAN MATEO	1	2	1	3	1	3	1	1	9	2	2	13	4	19
49.	SANTA ANA	0	0	8	0	0	3	9	3	9	0	14	23	14	26
50.	SANTA BARBARA	1	2	7	4	0	3	3	5	19	9	5	25	14	34
51.	SANTA CLARITA	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52.	SANTA MONICA	0	5	6	2	1	4	7	6	4	4	23	31	27	33
53.	SEQUOIAS	6	0	9	1	1	1	2	3	13	0	10	23	10	23
54.	SHASTA	4	2	7	2	1	2	3	4	18	1	6	25	7	27
55.	SIERRA	3	0	7	1	1	2	4	2	0	2	18	20	20	22
56.	SISKIYOUS	2	0	4	1	1	1	2	1	11	0	1	12	1	17
57.	SOLANO	0	1	2	1	0	4	1	7	8	5	3	16	8	19
58.	SONOMA	1	1	8	6	1	3	3	2	13	6	6	25	12	25
59.	SOUTH COUNTY	0	1	7	3	0	3	11	4	3	7	19	29	26	31
60.	SOUTHWESTERN	0	1	7	2	0	2	5	0	4	0	13	17	13	17
61.	STATE CENTER	(6)	(2)	(11)	(2)	(1)	(2)	(6)	(11)	-	-	-	(41)	(23)	
	a. Fresno	0	0	10	1	0	2	6	10	10	1	17	29	18	35
	b. Reedley	6	2	5	1	1	0	3	2	14	0	6	20	6	22
62.	VENTURA	(5)	(0)	(8)	(2)	(1)	(3)	(5)	(5)	-	-	-	(29)	(21)	
	a. Moorpark	2	0	5	0	1	2	3	2	4	0	11	15	11	18
	b. Ventura	4	0	6	2	1	3	5	3	5	2	17	24	19	29
63.	VICTOR VALLEY	0	0	4	0	0	2	3	1	9	2	8	10	10	19
64.	WEST HILLS	5	0	5	0	0	0	6	1	12	0	5	17	5	17
65.	WEST KERN	0	3	3	0	1	1	8	4	10	0	10	20	10	16
66.	WEST VALLEY	0	2	0	1	0	1	0	4	5	0	3	8	3	4
67.	YOSEMITE (Modesto)	10	5	8	4	1	4	7	5	25	4	15	44	19	57
68.	YUBA	4	2	6	2	1	2	2	4	10	0	12	23	12	28
	TOTALS	130	146	526	173	34	200	411	285	702	182	1037	1905	1219	2255

TABLE VII

Explanatory Notes:[5]

Column 1. -Agriculture, Horticulture and Forestry.

Column 2. -Applied and Graphic Arts.

Column 3. -Business and Office Occupations.

Column 4. -Health Services.

Column 5. -Home Economics.

Column 6. -Public and Personnel Service Occupations.

Column 7. -Technical.

Column 8. -Trade, and Industrial.

Column 9. -Total Curricula Offered in the Day Program Only.

Column 10. -Total Curricula Offered in the Evening Program Only.

Column 11. -Total Curricula Offered in Both Day and Evening Programs.

Column 12. -Total Number of Courses Offered in the Day, Evening, and Both Programs.

Column 13. -Total Curricula Offered in the Evening Program, Including Duplication of Day Programs.

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[5] A Guide for California Public Community Colleges, op. cit., pp 115-128.

The 1968 Session of the Legislature provided state financial support for Saturday classes. However, restrictions limit such classes to those offered during the week, until there is a broader interpretation of class offerings on Saturday, extensive utilization of facilities on Saturdays will be difficult.

GAIN IN ENROLLMENT CAPACITY

In the section of its report pertaining to the State Colleges the Coordinating Council staff computed the theoretical number of students that could be accommodated by extension of the hours of instruction. Such computation would also apply to the other segments.

> At present the maximum planned enrollment ceiling of a state college is based upon the use of facilities from 8:00 a.m. to 5:00 p.m., Monday through Friday, or for 45 hours. Theoretically, by the use of additional 25 evening and (four) Saturday hours (morning only) as suggested above, some 29/45's or 64.4 percent more full-time equivalent students could be accommodated.[6]

Community College districts were asked to provide enrollment figures for extended day and evening classes for 1967-68. Table VIII shows enrollment in extended day and

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[6] CCHE, California. "Meeting the Enrollment Demand for Public Higher Education in California through 1977-the need for additional colleges and university campuses," (Sacramento: Staff Report, February, 1969). p. IV-6.

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evening classes, compared to rated capacities of the California Community Colleges, in 1967-68.

According to the Coordinating Council staff report, the rated capacity of the colleges replying in this study was 361,213. This figure has been accepted by the writer without verification for the purposes of computation only. This capacity, divided by the 45 hours of regular operation, gave a rated capacity-per-hour of 8027. The computed additional capacity generated statewide by a 25-hour extension of instruction (holding classes from 5:00 p.m. to 10:00 p.m., Monday through Friday) would provide for an enrollment of 200,674.

The additional capacity for 29 hours of instruction, including Saturday classes, would provide for an enrollment of 232,782 statewide. This figure was not included in computations because of the limitations imposed on offering Saturday classes.

Table VIII

Enrollment in extended day and evening classes
compared to rated capacities, California Community Colleges, 1967-68.

District and/or College	Rated Capacity	Capacity Per Hour	Capacity 5-10 p.m.	Capacity 5-10 p.m. and Sat.	Enrollment 1967-68				Ratio Enrollment to Capacity 5 p.m. - 10 p.m.				Capacity Remaining 5 p.m. - 10 p.m.			
					1Q/1S	2Q/2S	3Q	4Q/SS	1Q/1S	2Q/2S	3Q	4Q/SS	1Q/1S	2Q/2S	3Q	4Q/SS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1. ALLAN HANCOCK	3741	83.13	2078	2411	1640	1547		0	78.9	74.4	–	0	438	531		2078
2. ANTELOPE VALLEY	3786	84.13	2103	2440	0	0		0	0	0	–	0	2103	2103		2103
3. BARSTOW	781	17.36	434	503	561	579		21	129.3	133.4	–	4.8	(127)	(145)		413
4. BUTTE																
5. CABRILLO	6105[a]	135.67	3392	3934	1045	1006		1289	30.8[a]	29.7	–	38.0	2347	2386		2103
6. CERRITOS	6430	142.89	3572	4144	3245	2729		2317	90.8	76.4	–	64.9	327	843		1255
7. CHAFFEY	4669	103.76	2594	3009	2932	3296		713	113.0	127.0	–	27.5	(338)	(702)		1881
8. CITRUS	5825	129.44	3236	3754	3114	2638		1376	96.2	81.5	–	42.5	122	598		1860
9. COACHELLA VALLEY	1425	31.67	792	918	2101	2349		0	265.4	296.6	–	0	(1309)	(1557)		792
10. CONTRA COSTA									122.7	118.6	–	20.7	(1155)	(1048)		4043
a Contra Costa	4468	99.29	2482	2877	2089	2266		445	84.2	91.3	–	17.9	393	216		2037
b Diablo Valley	4690	104.22	2606	3022	4154	3870		606	159.4	148.5	–	23.5	(1548)	(1264)		2006
11. EL CAMINO	10957	243.49	6087	7061	7199	7124		2098	118.3	117.0	–	34.5	(1112)	(1037)		3989
12. FOOTHILL	11875	263.89	6597	7653	5792	6918		4705[b]	87.8	104.9	–	71.3	805	(321)		1892[b]
a De Anza																
b Foothill																
13. FREMONT-NEWMARK	651	14.47	362	420	234	233	203	65	64.6	64.4	56.1	18.0	128	129	159	297
14. GAVILAN	643	14.29	357	414	0	0	0	0	0	0	0	0	357	357	357	357
15. GLENDALE	4711	104.69	2617	3036	783	2065		2009	29.9	78.9	–	76.8	1834	552		608
16. GROSSMONT	8503	188.96	4724	5480	0	0		0	0	0	–	0	4724	4724		4724
17. HARTNELL	2436	54.13	1353	1570	1066	1214		356	78.8	89.7	–	26.3	287	139		997
18. IMPERIAL	1883	41.84	1046	1213	707	667		0	67.6	63.8	–	0	339	379		1046
19. KERN																
a Bakersfield	4986	110.80	2770	3213	2249	2393		515	81.2	86.4	–	18.6	521	377		2255
b Porterville	740	16.44	411	478	282	306		351	68.6	74.5	–	85.4	129	105		60
20. LONG BEACH	8498	188.84	4721	5476	0	0		0	0	0	–	0				
21. LOS ANGELES CITY									132.9	130.8	–	38.3	(9707)	(9082)		18182
a City College	10763	239.18	5980	6936	7904	7321		3316	132.2	122.4	–	55.5	(1924)	(1341)		2664
b East L. A.	6684	148.53	3713	4307	7363	6908		1110	198.3	186.0	–	29.9	(3650)	(3195)		2603
c Harbor	3979	88.42	2211	2564	2250	2347		773	101.8	106.2	–	35.0	(39)	(136)		1438
d Pierce	9472	210.49	5262	6104	4486	4805		1502	83.7	91.3	–	28.5	776	457		3760
e Southwest	2052	45.60	1140	1322	397	756		257	34.8	66.3	–	22.5	743	384		883
f Trade-Tech	6766	150.36	3759	4360	9541	9449		2346	253.8	251.4	–	62.4	(5782)	(5690)		1413
g Valley	13336	296.36	7409	8594	7239	6969		1987	97.7	94.1	–	26.8	170	440		5422
22. DOS RIOS									74.3	86.5	–	26.6				
a American River	7577	168.38	4210	4883	2657	3571		729	63.1	84.8	–	17.3	1553	639		3481
b Sacramento City	6050	134.44	3361	3899	2969	2975		1286	88.3	88.5	–	38.3	392	386		2075
23. MARIN	4618	102.62	2566	2976	1079	1035		0	42.0	40.3	–	0	1487	1531		2566
24. MERCED	1693	37.62	941	1091	1489	1476		579	158.2	156.9	–	61.5	(548)	(535)		362
25. MONTEREY PENINSULA	3884	86.31	2158	2503	1896	2055		0	87.8	95.2	–	0	262	103		2158
26. MT. SAN ANTONIO	11625	258.33	6458	7492	0	0		0	0	0	–	0				
27. MT. SAN JACINTO	1790	39.78	995	1154	406	423		0	40.8	42.5	–	0	589	572		995
28. NORTH ORANGE COUNTY																
a Cypress																
b Fullerton	7209[a]	160.20	4005	4646	4108	4052		0	102.6[a]	101.2	–	0	(103)	(47)		4005
29. OCEANSIDE-CARLSBAD	2427	53.93	1348	1564	0	0		0	0	0	–	0	1348	1348		1348

Table VIII

Enrollment in extended day and evening classes
compared to rated capacities, California Community Colleges, 1967-68.

District and/or College	Rated Capacity	Capacity Per Hour	Capacity 5-10 p.m.	Capacity 5-10 p.m. and Sat.	Enrollment 1967-68				Ratio Enrollment to Capacity 5 p.m. - 10 p.m.				Capacity Remaining 5 p.m. - 10 p.m.			
					1Q/1S	2Q/2S	3Q	4Q/SS	1Q/1S	2Q/2S	3Q	4Q/SS	1Q/1S	2Q/2S	3Q	4Q/SS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
30. ORANGE COAST									190.7	204.2	–	0				
a Golden West	2621	58.24	1456	1689	2669	3104		0	183.3	213.2	–	0	(1213)	(1648)		1456
b Orange Coast	7281	161.80	4045	4692	7824	8127		0	193.4	200.9	–	0	(3779)	(4082)		4045
31. PALOMAR	5520	122.67	3067	3557	1931	1916		370	63.0	62.5	–	12.1	1136	1151		2697
32. PALO VERDE	506	11.24	281	326	366	351		33	130.2	124.9	–	11.7	(85)	(70)		248
33. PASADENA	9270	206.00	5150	5974	1832	1845		1856	35.6	35.8	–	36.0	3318	3305		3294
34. REDWOODS	1935	43.00	1075	1247	1000	900	800	0	93.0	83.7	–	74.4	75	175	275	1075
35. RIVERSIDE	4341	96.47	2412	2798	3667	3741		830	152.0	155.1	–	34.4	(1255)	(1329)		1582
36. SADDLEBACK	a								a							
37. SAN BERNARDINO	6934	154.09	3852	4469	5669	6438		0	147.2	167.1	–	0	(1817)	(2586)		3852
38. SAN DIEGO									105.1	113.2	–	33.4	(396)	(1022)		5159
a City College	4259	94.66	23665	2745	1235	1366		327	52.2	57.7	–	13.8	1131	1000		2039
b Mesa	5419	120.42	30105	8748	2918	3096		880	96.9	102.9	–	29.2	92	(86)		2130
c (Evening)	4259	94.66	23665	2745	3986	4303		1377	168.5	181.9	–	58.2	(1620)	(1937)		989
39. SAN FRANCISCO	9755	216.78	5420	6287	210	252		0	3.9	4.6	–	0	5210	5168		5420
40. SAN JOAQUIN DELTA	4884	108.53	2713	3147	3888	4406		0	143.3	162.4	–	0	(1175)	(1693)		2713
41. SAN JOSE	4942	109.82	2746	3185	169	152		0	6.2	5.5	–	0	2577	2594		2746
42. SAN LUIS OBISPO	3907	86.82	2171	2518	0	0		0	0	0	–	0	2171	2171		2171
43. SAN MATEO	7730	171.78	4295	4982	10465	9977		4456	243.7	232.3	–	103.7	(6170)	(5682)		(161)
44. SANTA ANA	5372	119.38	2985	3462	3903	3629		1191	130.8	121.6	–	39.9	(918)	(644)		1794
45. SANTA CLARITA	a								a							
46. SANTA MONICA	5974	132.76	3319	3850	7438	7847		1904	224.1	236.4	–	57.4	(4119)	(4528)		1415
47. SEQUOIAS	3834	85.20	2130	2471	6375	6669		0	299.3	313.1	–	0	(4245)	(4539)		2130
48. SHASTA	3163	70.29	1757	2038	322	378		196	18.3	21.5	–	11.2	1435	1379		1561
49. SIERRA	2552	56.71	1418	1645	0	0		0	0	0	–	0	1418	1418		1418
50. SONOMA	4972	110.49	2762	3204	5043	5359		200	182.3	194.0	–	7.2	(2281)	(2597)		2562
51. SOUTH COUNTY	11048	245.51	6138	7120	4058	3609	3008	0	66.1	58.8	–	49.0	2080	2529	3130	6138
52. STATE CENTER																
a Fresno City	5815	129.22	3231	3747	3758	3771		0	116.3	116.7	–	0	(527)	(540)		3231
b Reedley	1788	39.73	993	1152	421	441		0	42.4	----	–	44.4	572	552		993
53. SWEETWATER	4290	95.33	2383	2765	2765	2447		1148	116.0	102.7	–	48.2	(382)	(64)		1235
54. VENTURA																
a Moorpark	2082	46.27	1157	1342	1362	1395		0	117.7	120.6	–	0	(205)	(238)		1157
b Ventura	4884	108.53	2713	3147	5534	5297		977	204.0	196.2	–	36.0	(2821)	(2584)		1736
55. WEST HILLS	1243	27.62	691	801	1285	1283		0	186.0	186.6	–	0	(594)	(592)		691
56. WEST KERN	956	21.24	531	616	0	0		0	0	0	–	0	531	531		531
57. WEST VALLEY	3037	67.49	1687	1957	3048	3029		918	180.4	179.5	–	54.4	(1356)	(1342)		769
58. YOSEMITE	4088	90.84	2271	2634	4568	5135		0	201.1	226.1	–	0	(2297)	(2864)		2271
59. YUBA	2635	58.56	1464	1698	2010	2221		1016	137.3	151.7	–	69.4	(546)	(757)		448
60. PERALTA																
a Laney	4164	92.53	2313	2683	3700	3700		800	160.0	160.0	–	34.6	(1387)	(1387)		1513
b Merritt	5733	127.40	3185	3695	3195	2487	2807	0	100.3	78.1	88.1	0	(10)	698		378
TOTALS	361213	8026.96	200674	232782	199586	204013	6818	49230	99.5	101.7	3.4	24.5	1088	(3339)	4299	151066

NOTES: Computations are based on figures provided by the districts in Questionaire No. 1.
Colleges or districts not included in table above were not in existence or information was not provided:

a. Community Colleges/districts not in operation in 1967.

b. District figures only provided.

Explanatory Notes

Column 1.	Enrollment capacity existing in the fall, 1967-Taken from Council Staff Report. Table VI-2, i.e., Hancock 3,741.
Column 2.	Capacity divided by 45, i.e., the hours of use from 8:00 a.m. to 5:00 p.m., Monday through Friday, i.e., Hancock: 3,741 ÷ 45 = 83.13.
Column 3.	Theoretical additional capacity by use of facilities for the 25 hours from 5:00 p.m. to 10:00 p.m., Monday through Friday, i.e., Hancock: 83.13 x 25 = 2,078.
Column 4.	Theoretical additional capacity by use of facilities for the 29 hours from 5:00 p.m. to 10:00 p.m., Monday through Friday, and from 8:00 a.m. to 12:00 noon Saturday, i.e. Hancock: 83.13 x 29 = 2,411.
Columns 5-8.	Enrollments reported by districts for all classes held between 5:00 p.m. and 10:00 p.m. for the first quarter or semester; second quarter or semester; third quarter of operating in quarter system; and fourth quarter or summer session, i.e., Hancock, enrolled 1,640 students in the first semester, and 1,547 in the second semester. There was no summer session enrollment during these hours.
Columns 9-12.	Ratio of actual enrollment to computed capacity for the 25 hours, from 5:00 p.m. to 10:00 p.m., Monday through Friday, for each quarter or semester, i.e., Hancock, the enrollment was 78.9% of computed capacity in the first semester and 74.4% in the second semester. Facilities were not used for instruction during those hours in the summer.

Columns 13-15. Capacity remaining -or unused- from 5:00 p.m. to 10:00 p.m., Monday through Friday for each term, i.e., Hancock had capacity for an enrollment of 438 in the fall semester, 531 in the spring semester, and 2,078 in the summer session.

In the fall semester, 1967-68, Community Colleges in California enrolled 199,586, or 99.5 percent of the computed additional capacity. In the spring term, colleges enrolled 204,013, or 101.7 percent of the computed additional capacity. The summer term enrollment was 49.230 or 24.5 percent of computed additional capacity.

It was recognized that students enrolling in the extended day and evening program do not generally carry as heavy an academic load as students enrolled in the day program and, therefore, do not generate as many weekly student contact hours. However, the tables indicate that there was extensive use of facilities already made by the Community Colleges. Any computed gain in utilization would have to be reduced accordingly. The relationship between size and district ability to utilize college facilities during extended day and evening hours in the summer may be noted in Table VIII.

SUMMARY

Facilities of the California Community Colleges are used extensively from 5:00 p.m. to 10:00 p.m. during the week for all phases of their programs. This fact was not recognized by the Coordinating Council in computing a potential gain in plant capacity by extending the hours of instruction for day-graded students. When such utilization is considered, there is no computational gain except during the summer term.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

SUMMARY

The purpose of this study was to analyze assumptions and conclusions related to increases in efficient operation of California Community Colleges through year-round operation and extended hours of instruction.

Data was obtained through questionnaires mailed to every community college district and through studies on year-round operation made by 26 districts.

The data seemed to indicate that the assumptions and conclusions drawn in recent state studies do not necessarily apply to the community college.

With respect to year-round operation the Coordinating Council staff found that the additional enrollment capacity needed in the Community Colleges in 1977 might be reduced up to 32 percent, if the enrollment in the summer term equalled 40 percent of the fall term enrollments. The finding appeared to fail to take into account either the magnitude or the nature of present summer session enrollments in the colleges. Furthermore, the gain was expressed only in terms of construction. Inadequate attention was paid to the increased operational costs which the addition of a fourth quarter entail, or to accumulative costs. The additional facilities which are needed to accommodate a full-year operation, e.g., office space for the additional faculty which is required. Results of the questionnaire study tend to show that the community colleges are giving sufficient attention and study to the problem of instituting year-round operations and that they are adopting this calendar, where feasible in terms of their own operations and the calendars of institutions to which their students transfer.

With respect to extended hours of instruction the Coordinating Council staff suggested that the community colleges might extend their hours of instruction into the evening hours and to Saturday morning in order to accommodate additional enrollments in existing facilities. Current utilization standards related to the hours of 8 a.m. to 5 p.m. for a five-day week. The community colleges made good use of the hours between 5 p.m. and 10 p.m., without being "charged" for them in the assessment of their need for additional facilities. Nearly two-thirds of the occupational curricula were offered by the colleges where available during the late afternoon and evening hours. Facilities were also used for continuing education, community services, and other types of non-credit programs during the evening hours.

There was still rather little utilization of the community college facilities on Saturday, despite the 1968 change in legislation which provided State support for such classes for the first time, providing that a certain portion of the instruction in the courses was carried on during the week. There is now some potential for increased utilization of facilities by means of Saturday classes, although it is somewhat doubtful that faculty and students would favor such a move.

CONCLUSIONS

Conclusions were drawn with respect to year-round operation and extended hours of instruction.

Year-round operation

With respect to year-round operation, in general it was concluded that conversion to a year-round operation will do little to solve the long-term needs for additional capacity of most of the districts. The summer quarter will produce some additional capacity which would help for a short time but the problem of providing additional facilities for the large enrollments which are projected for 1977 is only postponed for a year or two. The nature and size of the additional benefits resulting from year-round operations are not at all clear at this time, at least with respect to the community colleges. Additional operational costs may well outweigh benefits in terms of increased enrollment capacity, particularly if the colleges' own students are unable to take advantage of the summer quarter because of their need for earnings from full-time employment.

Specific conclusions with respect to year-round operation were:

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1. Year-round operation under any calendar plan is not necessary for California Community Colleges until existing facilities cannot meet the demands of current or anticipated enrollments.

2. Utilization of Community College facilities for all purposes to the greatest degree possible is necessary and should be encouraged.

3. There are no objective data which support one type of academic calendar over another in terms of educational advantage.

4. Community College districts that have completed comprehensive studies have concluded that Community College programs and functions can be met best by extended utilization of facilities through summer sessions rather than by year-round operation. A number of Community Colleges operate 48 weeks.

5. Clear-cut decisions in respect to year-round operation are difficult because of the following uncertainties: financial implications, bond issues and override tax issues, controlled enrollment, and enforcement of summer enrollment to spread attendance evenly over four quarters.

6. Some financial estimates on year-round operation conclude that shortrun increases in operating expenses may be more than offset by longrun decreases in capital expenditures. Other estimates conclude just the opposite.

7. A building lasts 50 years, and construction savings are one-time savings. Some studies indicate higher costs for year-round operation, and these costs are continuing, cumulative, added expenses. Costs to students, a factor of great concern to Community Colleges, should be considered.

8. Adoption of the quarter plan at Chabot College in Hayward was prompted in part by willingness of the district to experiment and by the fact that its transfer students will attend primarily Hayward State College. Some will enroll at the University of California at Berkeley. (Both institutions are on the quarter system).

9. Community Colleges will change to the quarter system when the State Colleges and University campuses, to which their students transfer, convert to the quarter system. Proposed delays in conversion to the four-quarter system are the result of conclusions that Community Colleges should not move faster in this respect than State Colleges and University campuses to which they send their students.

10. Until evaluation studies prove otherwise, conclusions that year-round operation is desirable for all Community Colleges do not appear to be warranted.

Extended Hours of Instruction

In general it was concluded that little additional capacity would probably be gained by increasing the schedule of late afternoon and evening classes and/or scheduling classes on Saturday. Most colleges have rather substantial enrollments in extended day and evening programs, which neither help nor hinder them with respect to the projection of enrollments and capital outlay program needs. The colleges should be encouraged to experiment with the scheduling of Saturday classes, while attempts are made to remove the present restrictions on classes which qualify for the State support.

Specific conclusions with respect to extended hours of instruction were:

1. Most California Community Colleges that operate extended day and evening programs show a high utilization of facilities. The ratio to computed capacity during the fall and spring terms was 100%.

2. Weekly student contact hours in Community Colleges are based on an 8:00 a.m. to 5:00 p.m. day. Facilities needed to house evening programs are not included in calculation of state financial support.

3. Replacement of present extended day and evening program by extension of the day program until 10:00 p.m., would result in disruption and cancellation of a considerable portion of community college functions.

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4. Extension of the day program through the evening hours would result in increased costs of operation to community college districts. Hourly rates of compensation to instructors for evening programs are usually less than contractual amounts for day instruction.

5. Occupational-centered curriculums are increasing. This will result in increased utilization of facilities.

6. A number of colleges are too small in size, or are located in agricultural areas, to hope to gain capacity through the utilization of facilities during the evening hours in the summer months.

7. Only during the summer months could there be any appreciable gain in the utilization of facilities during the extended day and evening hours.

8. Utilization of laboratories and vocational-technical facilities for extended day and evening instruction will be limited to the purposes for which they were designed. Such limitation must be considered in the computation of capacity. It is unlikely, for example, that there will be sufficient enrollment in the extended day and evening program to fully utilize a physics laboratory.

9. It is likely that requiring community colleges to show a high rate of utilization of facilities for either (1) the extended day and evening program or (2) extension of hours of instruction for the day-graded program, would result in districts holding nearly all classes on campus rather than utilizing off-campus facilities where feasible in order to take the educational programs as close as possible to the people to be served.

RECOMMENDATIONS

Year-round operation

With respect to year-round operation it was recommended that

1. Community colleges continue to seek ways to accommodate greater numbers of students in existing and future facilities. Increased utilization within existing time scheduled, teaching stations, and student availability should be explored by the Board of Governors.

2. Support be given to the general concept of year-round utilization.

3. The degree to which community college facilities are utilized, type of program being offered at each hour, and number of students relative to classroom size be studied by the Board of Governors.

4. A pilot study of detailed costs in changing from one system to another be conducted by the Board of Governors at one or more selected community colleges.

5. Planning funds for year-round operation in community colleges be provided by the state.

6. Research be undertaken by the Board of Governors to determine costs of operation of a summer term in comparison with the operational costs of a regular semester.

7. Research be undertaken by the Board of Governors in defining and estimating costs for each aspect in conversion to year-round operation in community colleges.

8. The Board of Governors undertake a study of equitable financing of summer term.

9. Several community colleges be selected by the Board of Governors for research on problems and effects of year-round operation.

10. Criteria be established by the Board of Governors for evaluation of year-round operation at community colleges.

Extended Hours of Instruction

With respect to extended hours of instruction it was recommended that

1. The limitations on classes to be offered on Saturday be changed and that equitable financing be provided during the summertime.

2. Utilization of facilities for every function of the community colleges be included in computations of capacity.

3. The comprehensive study on utilization of facilities to be undertaken by the Board of Governors of the California Community Colleges be the basis for such computations.

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